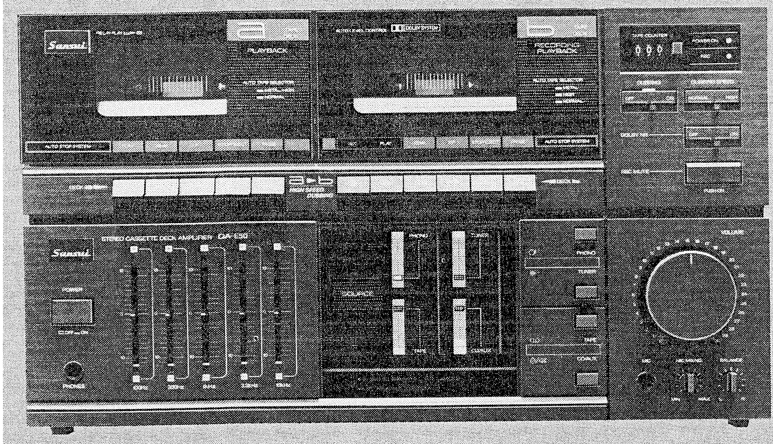
SERVICE MANUAL

STEREO CASSETTE DECK AMPLIFIER

SANSUI DA-E50



CAUTION

1. Parts identified by the ⚠ symbol on the schematic diagram and the parts list are critical for safety. Use only replacement parts that have critical characteristics recommended by the manufacturer.
2. Make leakage-current or resistance measurements to determine that exposed parts are acceptably insulated from the supply circuit before returning the appliance to the customer.

SANSUI ELECTRIC CO., LTD.

•SPECIFICATIONS

Amplifier section

Power output

Min. RMS, both channels driven, from 40 to 20,000 Hz, with no more than 0.5% total harmonic distortion.
25 watts per channel into 8 ohms.

Load impedance	8 ohms
Total harmonic distortion	less than 0.5% at or below rated min. RMS power output
Frequency response (at 1 watt)	
Overall (from CD/AUX)å	10 to 50,000 Hz, +1 dB, −3 dB
Input sensitivity and impedance (at 1 kHz)	
CD/AUX	150 mV/47 kohms
MIC	0.5 mV/10 kohms
Signal to noise ratio (short-circuit, A-network)	
CD/AUX	Better than 90 dB
Equalizer frequency	100 Hz, 330 Hz, 1 kHz, 3.3 kHz, 10 kHz
Level variation range	±10 dB

Cassette deck section

Track format	4-track/2-channel system
Tape speed	4.8 cm/sec
Heads	
Rec/play head	HIGH-Bs hard permalloy
Play head	HIGH-Bs hard permalloy
Erase head	Double-gap HIGH-Bs ferrite
Motor	Electronically controlled DC motor × 2
Wow/flutter	0.12% max (WRMS)
Fast forwarding (rewinding) time	Approx. 110 sec. (for C-60 tape)
Frequency response (−20 VU recording/playback)	
Normal tape (LH)	20 to 15,000 Hz (30 to 14,000 Hz ±3 dB)
Chrome tape	20 to 16,000 Hz (30 to 15,000 Hz ±3 dB)
Metal tape	20 to 16,000 Hz (30 to 15,000 Hz ±3 dB)
Erasure rate (metal tape)	More than 70 dB at 1 kHz
Recording bias frequency	105 kHz
Signal-to-noise ratio (Recording/playback with metal tape)	
DOLBY NR OFF	Better than 54 dB
DOLBY NR ON	Better than 64 dB (above 5 kHz)

Others

Power voltage	120/220/240V (50/60 Hz)
For U.S.A. & Canada	120V (60 Hz)
Power consumption	135 watts 160 VA Rated 160 watts Maximum
Dimensions	380 mm (15″) W 222 mm (8-3/4″) H 301 mm (11-7/8″) D
Weight	5.9 kg (13.0 lbs) net 7.0 kg (15.4 lbs) packed

- * Design and specifications subject to changes without notice for improvements.
- * Due to local laws and regulations, this unit sold in some areas are not equipped with variable voltage selectors
- * Noise reduction system manufactured under license from Dolby Laboratories Licensing Corporation.
  "Dolby" and the double D symbol are trade marks of Dolby Laboratories Licensing Corporation.

NOTE

1. The symbols, UL, CSA, SA, BS, UK, EU, AS, SEV, XX <EXPORT> and XX-V <EXPORT(V)> on the parts list and the schematic diagram mean followings respectively.

UL...................... Manufactured for U.S.A market.
(Underwriters Laboratories approved model.)
CSA.................... Manufactured for Canadian market.
SA...................... Manufactured for South African market.
BS, UK............... Manufactured for United Kingdom market.
EU...................... Manufactured for European market.
AS...................... Manufactured for Australian market.
SEV.................... Manufactured for Swiss market.
XX...................... Standard Version with Inner Voltage Selector.
<EXPORT>
XX-V.................. Standard Version with Outer Voltage Selector.
<EXPORT(V)>
NON MARK........ Common Parts.

2. Some printed circuit boards are not supplied assembled. To separate these in this service manual, the stock numbers are not indicated for these boards. However, stock numbers for individual parts are indicated.

3. Since some capacitors and resistors are omitted from parts lists in this service manual, refer to the Common Parts List for capacitors and resistors, which was issued on February 1983.

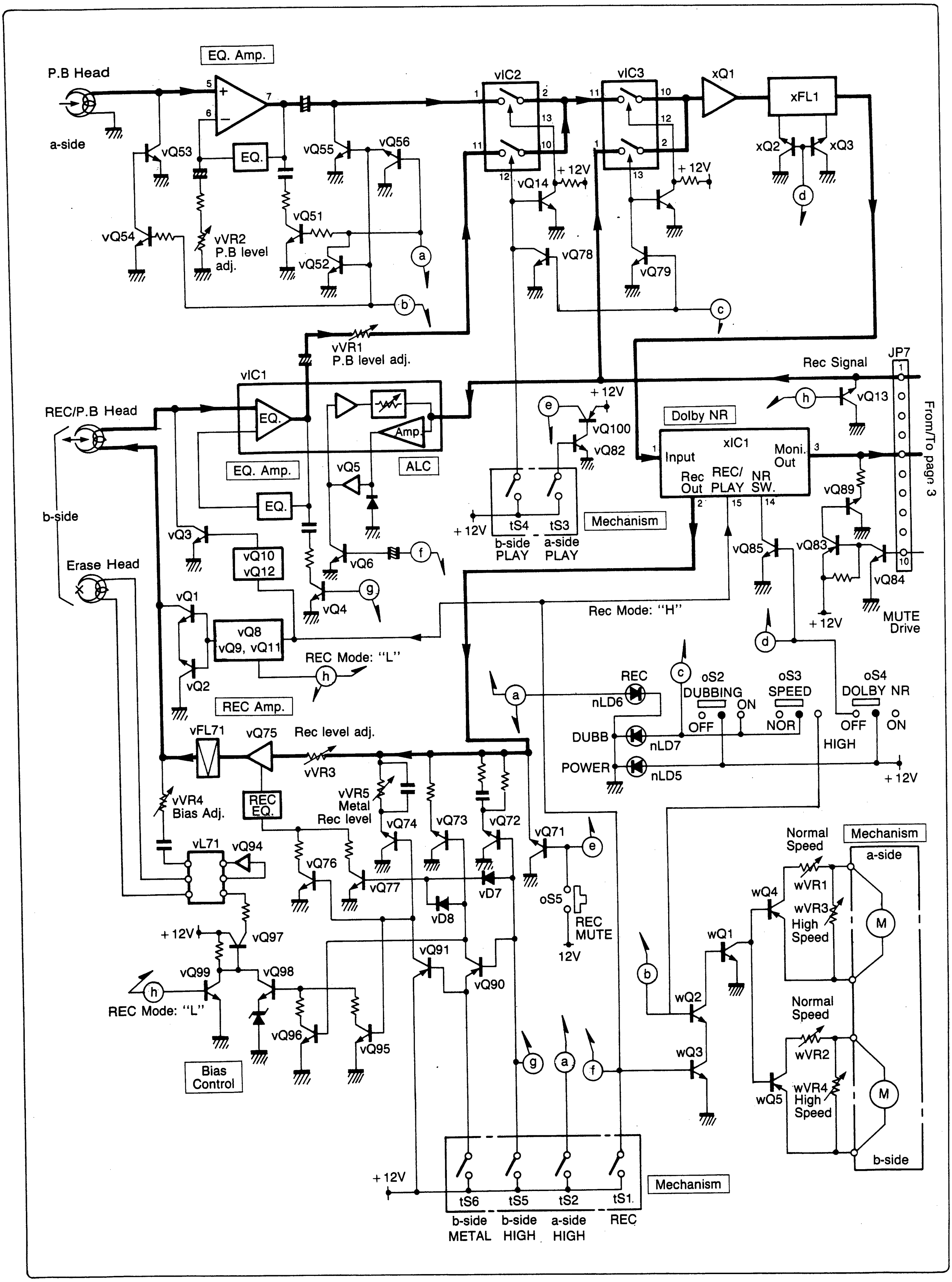
4. Abbreviations in this service manual are as follows.

•Abbreviations List

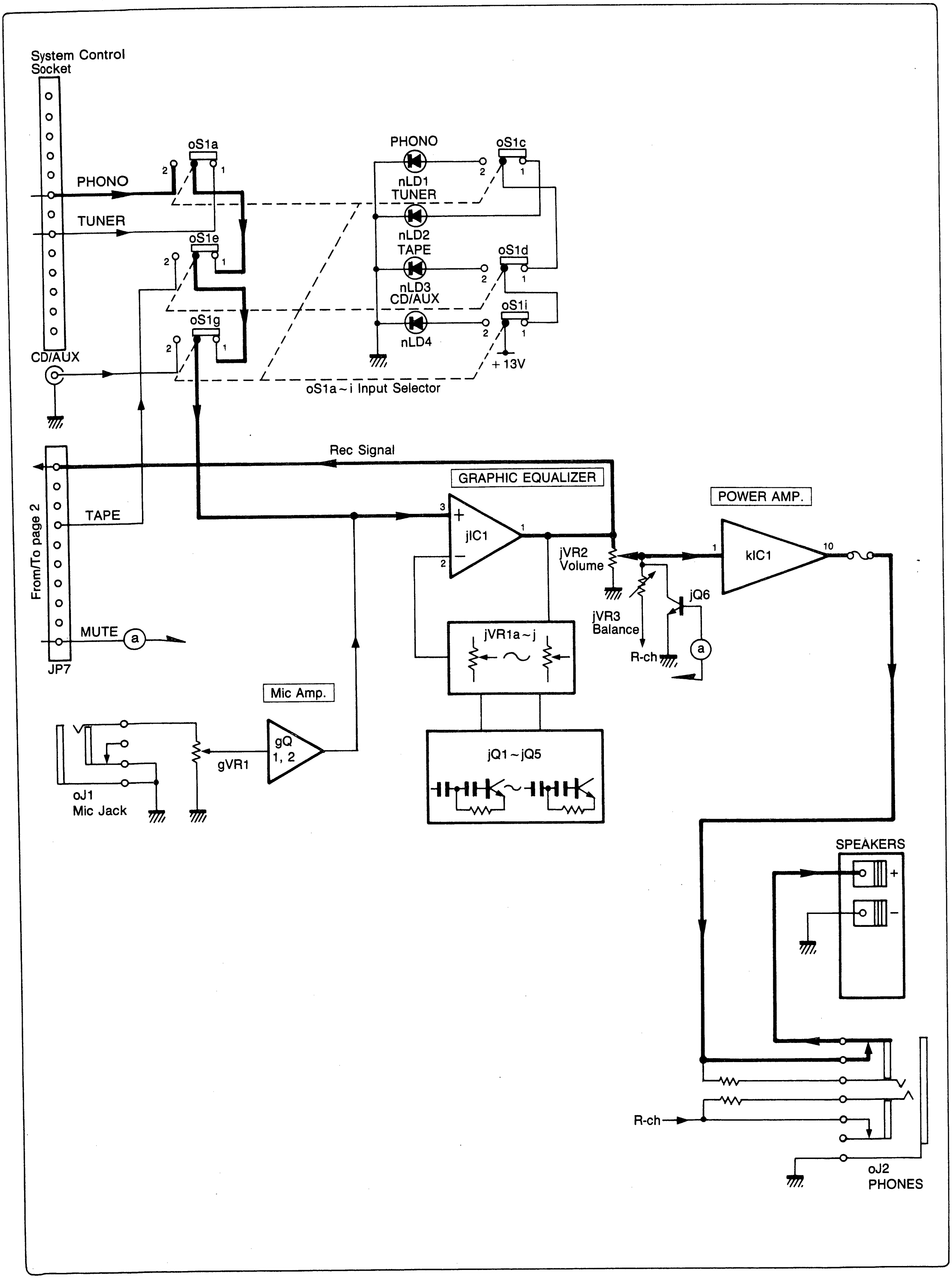
C.R. : Carbon Resistor
S.R. : Solid Resistor
Ce.R. : Cement Resistor
M.R. : Metal Film Resistor
F.R. : Fusing Resistor
N.I.R. : Non-Inflammable Resistor
A.R. : Array Resistor
C.C. : Ceramic Capacitor
C.T. : Ceramic Capacitor, Temperature Compensation
E.C. : Electrolytic Capacitor
E.L. : Low Leak Electrolytic Capacitor
E.B. : Bi-Polar Electrolytic Capacitor
E.B.L. : Low Leak Bi-Polar Electrolytic Capacitor
Ta.C. : Tantalum Capacitor
F.C. : Film Capacitor
M.P. : Metalized Paper Capacitor
P.C. : Polystyrene Capacitor
G.C. : Gimmic Capacitor
A.C. : Array Capacitor
V.R. : Variable Resistor
S.V.R. : Semi Variable Resistor
SW. : Switch
Chip R. : Chip Resistor
Chip C. : Chip Capaçitor

1. BLOCK DIAGRAM

1-1. Cassette Deck Section


P.B Head
a-side
EQ. Amp.
vQ53
EQ.
vQ55
vQ56
vQ51
vQ54
vVR2
P.B level
adj.
vQ52
a
b
vIC2
vIC3
xQ1
xFL1
xQ2
xQ3
d
+12V
vQ14
vQ78
vQ79
c
vVR1
P.B level adj.
vIC1
Rec Signal
JP7
REC/P.B Head
EQ.
Amp.
EQ. Amp.
ALC
vQ5
e
+12V
vQ100
vQ82
h
vQ13
Dolby NR
xIC1
Input
Moni.
Out
Rec
Out
REC/
PLAY
NR
SW.
From/To page 3
b-side
EQ.
vQ3
vQ10
vQ12
vQ6
f
+12V
tS4
tS3
b-side
PLAY
a-side
PLAY
Mechanism
vQ89
vQ85
vQ83
vQ84
Erase Head
vQ1
vQ8
vQ9, vQ11
vQ4
g
Rec Mode: "H"
+12V
MUTE
Drive
vQ2
REC Mode: "L"
h
REC Amp.
a
REC
nLD6
c
oS2
DUBBING
ON
OFF
oS3
SPEED
NOR
HIGH
oS4
DOLBY NR
OFF
ON
d
DUBB
nLD7
POWER
nLD5
+12V
vFL71
vQ75
Rec level adj.
vVR3
vVR4
Bias Adj.
REC
EQ.
vVR5
Metal
Rec level
vQ74
vQ73
vQ72
vQ71
e
Normal
Speed
Mechanism
a-side
vL71
vQ94
vQ76
vQ77
vD7
vD8
oS5
REC
MUTE
12V
wVR1
wQ4
wVR3
High
Speed
M
+12V
vQ97
vQ91
vQ90
wQ1
vQ99
vQ98
h
REC Mode: "L"
b
wQ2
Normal
Speed
vQ96
vQ95
g
a
f
wQ3
wVR2
wVR4
High
Speed
wQ5
M
Bias
Control
b-side
+12V
tS6
tS5
tS2
tS1
Mechanism
b-side
METAL
b-side
HIGH
a-side
HIGH
REC

1-2. Audio Amp. Section


System Control Socket
PHONO
TUNER
CD/AUX
oS1a
oS1e
oS1g
oS1c
oS1d
oS1i
2
1
PHONO
nLD1
TUNER
nLD2
TAPE
nLD3
CD/AUX
nLD4
+13V
oS1a~i Input Selector
Rec Signal
From/To page 2
TAPE
MUTE
a
JP7
GRAPHIC EQUALIZER
3
+
−
2
jIC1
1
jVR1a~j
jQ1~jQ5
jVR2
Volume
jVR3
Balance
R-ch
jQ6
a
POWER AMP.
1
kIC1
10
Mic Amp.
gQ
1, 2
gVR1
oJ1
Mic Jack
SPEAKERS
+
−
R-ch
oJ2
PHONES

2. OPERATIONS OF CASSETTE MECHANISM

Fig. 2-1 Front Side View of Mechanism Chassis

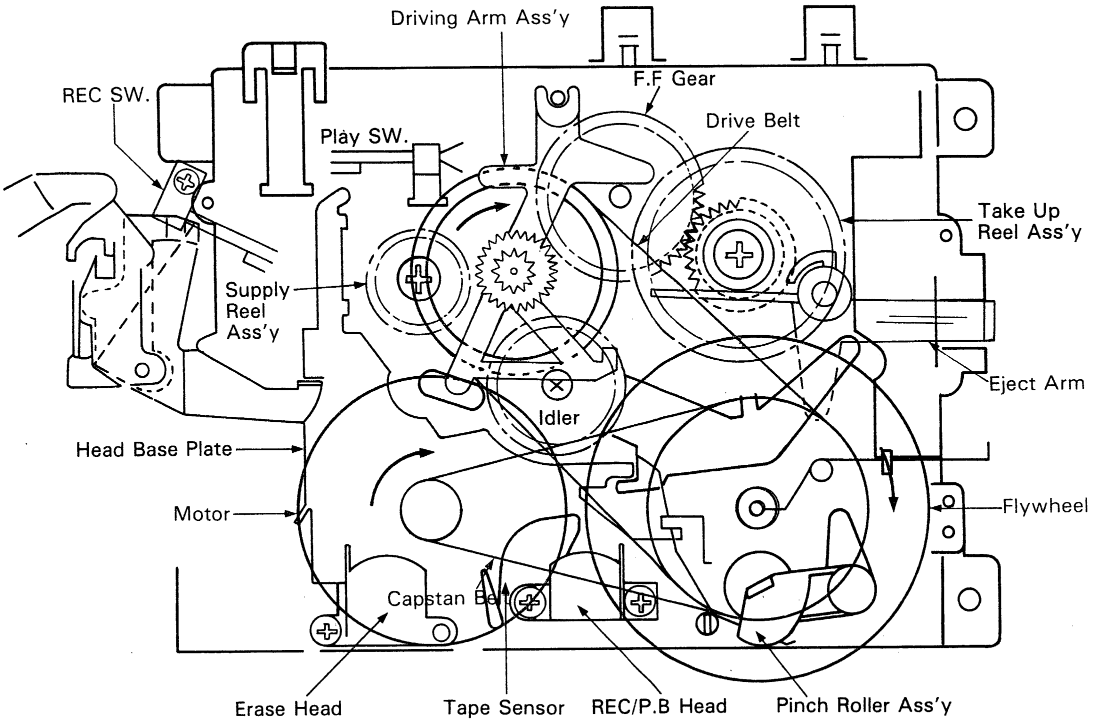
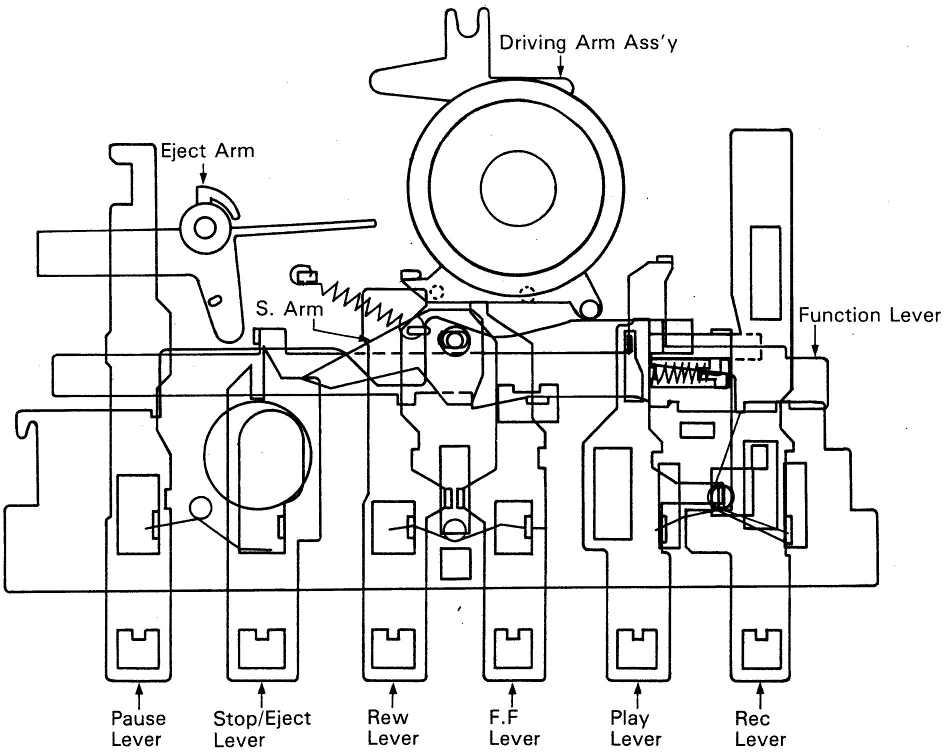
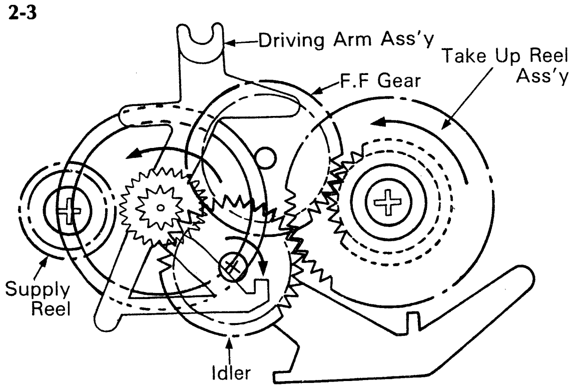

Driving Arm Ass'y
F.F Gear
REC SW.
Drive Belt
Play SW.
Take Up Reel Ass'y
Supply Reel Ass'y
Eject Arm
Idler
Head Base Plate
Motor
Flywheel
Capstan Belt
Erase Head
Tape Sensor
REC/P.B Head
Pinch Roller Ass'y

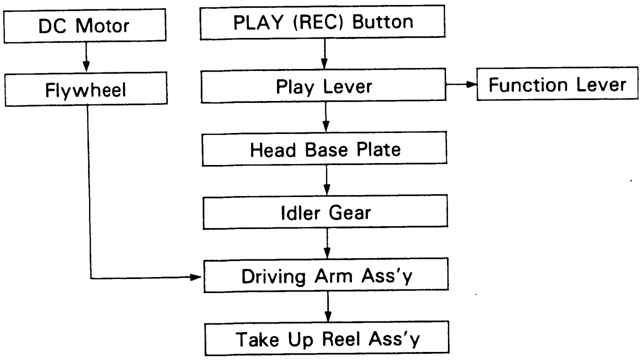
Fig. 2-2 Rear Side View of Mechanism Chassis


Driving Arm Ass'y
Eject Arm
S. Arm
Function Lever
Pause Lever
Stop/Eject Lever
Rew Lever
F.F Lever
Play Lever
Rec Lever

2-1. Playback Operation (See Figs. 2-1, 2-2, 2-3)

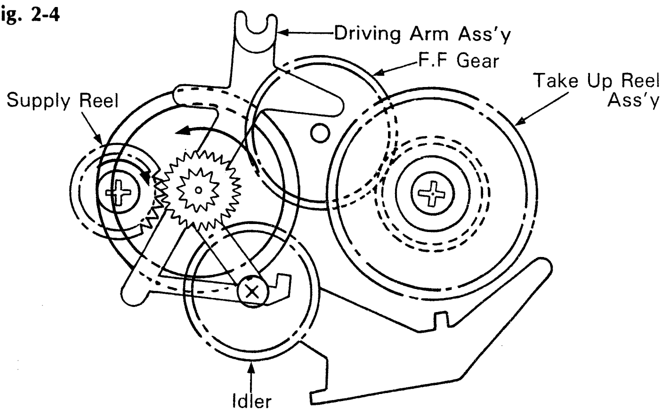
Fig. 2-3

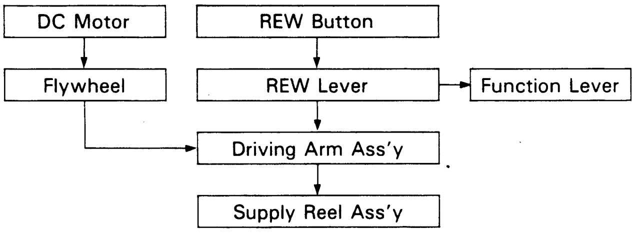

Driving Arm Ass'y
Take Up Reel Ass'y
F.F Gear
Supply Reel
Idler


DC Motor
Flywheel
PLAY (REC) Button
Play Lever
Function Lever
Head Base Plate
Idler Gear
Driving Arm Ass'y
Take Up Reel Ass'y

2-2. Fast-Foward Operation (See Figs. 2-1, 2-2, 2-4)

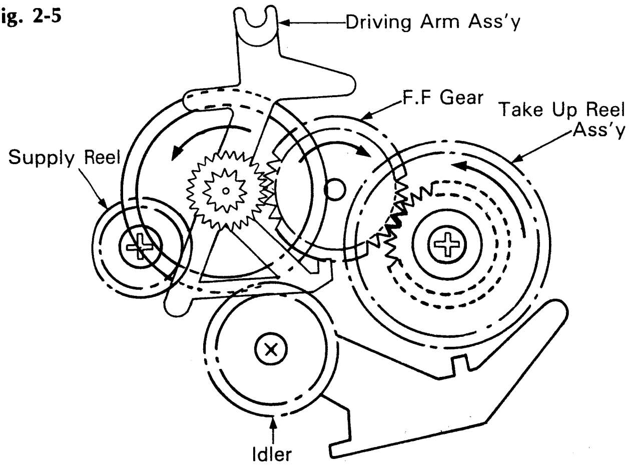
Fig. 2-4

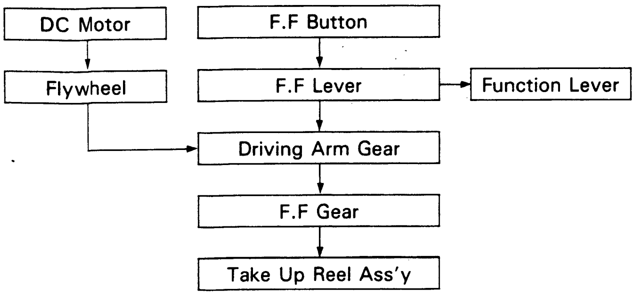

Driving Arm Ass'y
F.F Gear
Take Up Reel Ass'y
Supply Reel
Idler


DC Motor
Flywheel
REW Button
REW Lever
Function Lever
Driving Arm Ass'y
Supply Reel Ass'y

2-3 Rewind Operation (See Fig. 2-1, 2-2 & 2-5)

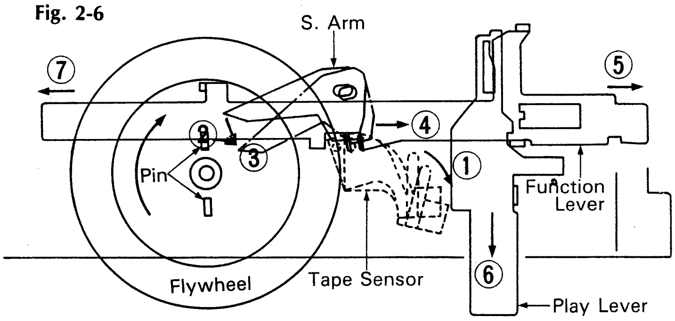
Fig. 2-5


Driving Arm Ass'y
F.F Gear
Take Up Reel Ass'y
Supply Reel
Idler


DC Motor
Flywheel
F.F Button
F.F Lever
Function Lever
Driving Arm Gear
F.F Gear
Take Up Reel Ass'y

2-4. Auto Shut-off Mechanism (Playback and Recording mode only) (See Fig. 2-6)

Fig. 2-6


S. Arm
⑦
⑤
④
②
③
①
Pin
Function Lever
Flywheel
Tape Sensor
⑥
Play Lever

The auto shut-off mechanism causes playback (recording) motion to stop when the tape stops running.

1) While the tape is running, tape sensor presses the tape due to weak tape tension.
2) When the running terminates, the tape sensor is pressed downward by the tape due to strong tape tension, and tape sensor pulls the s. arm, it is pushed by the pin of the flywheel ass'y and pushed the function lever, causing playback (recording) motion to terminate.

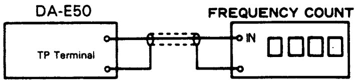
3. ADJUSTMENTS

3-1. Tape Speed Adjustment

- Adjust the tape speed of b-side as fast as a-side.

Note: 1. Use Sansui Test Tape, SCT-S3K.
(3 kHz signals are recorded on the tape).
2. Connections are shown in Fig. 3-1.

Fig. 3-1



1) Normal Speed Adjustment

STEP	SUBJECT	MEASURE OUTPUT	SETTING	ADJUSTMENT	ADJUST FOR	REMARKS
1.	a-side Mecha. (NORMAL)	TP Terminal, between (PointⒶ, output L-ch or PointⒷ, output R-ch) and GND on the F-5487. Frequency Counter See Fig. 3-5	Playback the TEST TAPE SCT-S3K. a-side Mecha.	Turn semi-variable resistor wVR1 on the F-5487 board.	$3000\text{Hz}^{+30\text{Hz}}_{-0\text{Hz}}$	See Fig. 3-5 on page 7.
2.	b-side Mecha. (NORMAL)	TP Terminal, between (PointⒶ, output L-ch or PointⒷ, output R-ch) and GND on the F-5487. Frequency Counter See Fig. 3-5	Playback the TEST TAPE SCT-S3K. b-side Mecha.	Turn semi-variable resistor wVR2 on the F-5487 board.	$3000\text{Hz}^{+30\text{Hz}}_{-0\text{Hz}}$	

2) High Speed Adjustment

Note: 1. Before this adjustment, regulate "1) Normal Speed Adjustment".
2. Set the DUBBING switch .... OFF

STEP	SUBJECT	MEASURE OUTPUT	SETTING	ADJUSTMENT	ADJUST FOR	REMARKS
1.	a-side Mecha. (HIGH)	TP Terminal, between (PointⒶ, output L-ch or PointⒷ, output R-ch) and GND on the F-5487. Frequency Counter See Fig. 3-5	1.TP Terminal, short between PointⒸ and GND (See Fig. 3-5 on page 7) 2.Playback the TEST TAPE SCT-S3K. a-side Mecha.	Turn semi-variable resistor wVR3 on the F-5487 board.	$6000\text{Hz}^{+60\text{Hz}}_{-0\text{Hz}}$	See Fig. 3-5 on page 7.
2.	b-side Mecha. (HIGH)	TP Terminal, between (PointⒶ, output L-ch or PointⒷ, output R-ch) and GND on the F-5487. Frequency Counter See Fig. 3-5	1.TP Terminal, short between PointⒸ and GND (See Fig. 3-5 on page 7) 2.Playback the TEST TAPE SCT-S3K. b-side Mecha.	Turn semi-variable resistor wVR4 on the F-5487 board.	$6000\text{Hz}^{+60\text{Hz}}_{-0\text{Hz}}$	

3-2. Playback Adjustment

Note: 1. Before this adjustment, clean REC/P.B. head surface.
2. For this adjustment, use Sansui Test Tape, SCT-F10K and SCT-L400.
3. Set the Dolby NR switch to OFF.
4. Connections are shown in Fig. 3-2.

Fig. 3-2

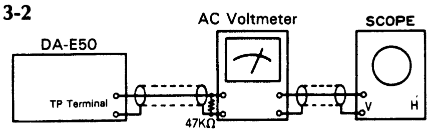
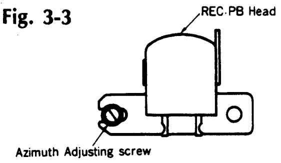


Fig. 3-3



1) a-Side Mecha. Adjustment

STEP	SUBJECT	MEASURE OUTPUT	SETTING	ADJUSTMENT	ADJUST FOR	REMARKS
1.	REC/P.B. Head Adj.	TP Terminal, between (PointⒶ, output L-ch or PointⒷ, output R-ch) and GND on the F-5487. AC Voltmeter and Scope	Playback the TEST TAPE SCT-F10K	Adjust the azimuth adjusting screw in Fig. 3-3.	MAX. Output both channels	Refer to removement of Lid Ass'y on Page 8. After this adjustment, lock the screw with paint.
2.	Playback Level Adj.	TP Terminal, between (PointⒶ, output L-ch or PointⒷ, output R-ch) and GND on the F-5487. AC Voltmeter and Scope	Playback the TEST TAPE SCT-L400	Adjust each vVR2 (L- and R-ch, F-5487)	580mV ± 2dB	See Fig. 3-5 on Page 7.

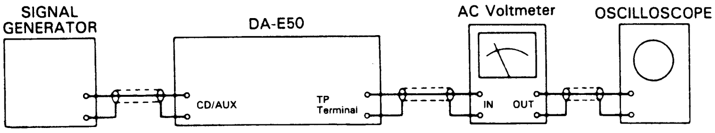
2) b-Side Mecha. Adjustment

STEP	SUBJECT	MEASURE OUTPUT	SETTING	ADJUSTMENT	ADJUST FOR	REMARKS
1.	REC/P.B. Head Adj.	TP Terminal, between (PointⒶ, output L-ch or PointⒷ, output R-ch) and GND on the F-5487. AC Voltmeter and Scope	Playback the TEST TAPE SCT-F10K	Adjust the azimuth adjusting screw in Fig. 3-3.	MAX. Output both channels	Refer to removement of Lid Ass'y on Page 8. After this adjustment, lock the screw with paint.
2.	Playback Level Adj.	TP Terminal, between (PointⒶ, output L-ch or PointⒷ, output R-ch) and GND on the F-5487. AC Voltmeter and Scope	Playback the TEST TAPE SCT-L400	Adjust each vVR1 (L- and R-CH, F-5487)	580mV ±2dB	See Fig. 3-5.

3-3. REC Level & Frequency Response Adjustment <b-side mecha. only>

Note: 1. Connections are shown in Fig. 3-4.
2. Set the Dolby NR switch to OFF.
3. Set the CD/AUX switch to ON.

Fig. 3-4


SIGNAL GENERATOR
DA-E50
CD/AUX
TP Terminal
AC Voltmeter
IN
OUT
OSCILLOSCOPE

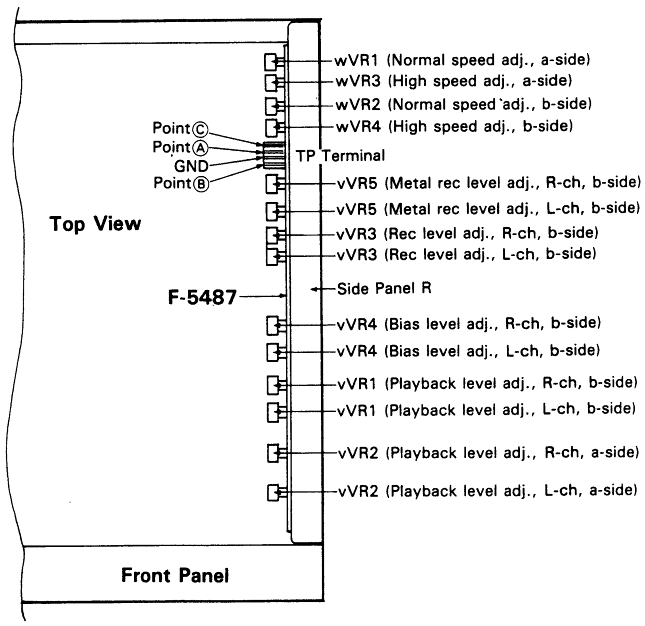
STEP	SUBJECT	INPUT SIGNAL	MEASURE OUTPUT	SETTING	ADJUSTMENT	REMARKS
1.	REC Level Adj.	Feed 1kHz, 50mV from S.G. into CD/AUX Input.	TP Terminal, between (PointⒶ, output L-ch or PointⒷ, output R-ch) and GND on the F-5487. AC Voltmeter and Scope	Load the TEST TAPE SCT-SA. 1.Push REC button. 2.Playback the 1kHz signal.	Adjust vVR3 (L and R-ch, F-5487) until playback level of the b-side Mecha. and output signal level on recording operation will be equal.	See Fig. 3-5.
2.	Frequency Response Adj.	Feed 1kHz 15mV and 10kHz 15mV from S.G. into CD/AUX Input	TP Terminal, between (PointⒶ, output L-ch or PointⒷ, output R-ch) and GND on the F-5487. AC Voltmeter and Scope	Load the TEST TAPE SCT-SA. 1.Record the 1kHz and 10kHz signals from S.G. 2.Playback the 1kHz and 10kHz signals, then confirm 10kHz signal level in less than 1kHz signal level ±2dB on VTVM.	1.If not, adjust vVR4 (L and R-ch, F-5487) slightly until the 10kHz signal level in less than 1kHz signal level ±2dB on VTVM.	See Fig. 3-5.
3.	Metal REC Level Adj.	Feed 1kHz, 50mV from S.G. into CD/AUX Input	TP Terminal, between (PointⒶ, output L-ch or PointⒷ, output R-ch) and GND on the F-5487. AC Voltmeter and Scope	Load the TEST TAPE SCT-MA. 1.Push REC button. 2.Playback the 1kHz signal.	Adjust vVR5 (L and R-ch, F-5487) until playback level of the b-side Mecha. and output signal level on recording operation will be equal.	See Fig. 3-5.

◆ List of Sansui Test Tape

Name of TEST TAPE	Recorded Frequency	Description	Equivalent To
SCT-F40	40 Hz	Playback Frequency Response Check	–
SCT-F1K	1 kHz	High Frequency Equialization Check	–
SCT-F10K	10 kHz	REC/PB Head Adjustment	–
SCT-L400N	400 Hz	Playback Level and Indicator Level Adjustment	–
SCT-S3K	3 kHz	Speed Check and Wow & Flutter Check	–
*SCT-AD (NORMAL)	–	Recording Bias Adjustment	TDK AD
*SCT-SA (HIGH)	–	REC/PB Level Adjustment	TDK SA
*SCT-MA (METAL)	–	Frequency Response Check	TDK MA

•**Note:** Some reference tapes marked * are not supplied.
As these are equivalent to ones indicated above, please obtain these blank tapes on your side as possible.

Fig. 3-5

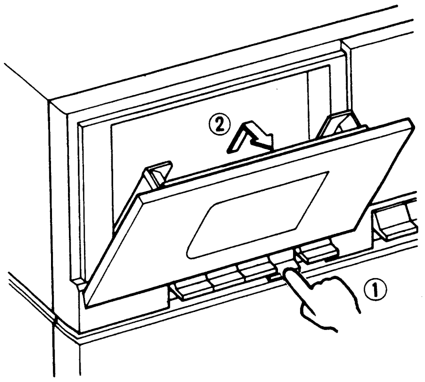

wVR1 (Normal speed adj., a-side)
wVR3 (High speed adj., a-side)
wVR2 (Normal speed adj., b-side)
wVR4 (High speed adj., b-side)
PointⒸ
PointⒶ
GND
PointⒷ
TP Terminal
vVR5 (Metal rec level adj., R-ch, b-side)
vVR5 (Metal rec level adj., L-ch, b-side)
vVR3 (Rec level adj., R-ch, b-side)
vVR3 (Rec level adj., L-ch, b-side)
Top View
F-5487
Side Panel R
vVR4 (Bias level adj., R-ch, b-side)
vVR4 (Bias level adj., L-ch, b-side)
vVR1 (Playback level adj., R-ch, b-side)
vVR1 (Playback level adj., L-ch, b-side)
vVR2 (Playback level adj., R-ch, a-side)
vVR2 (Playback level adj., L-ch, a-side)
Front Panel

4. MAIN PARTS REPLACEMENT

A. Cassette Lid A or B (See Fig. 4-1)

1) Depress the STOP/EJECT button to open cassette lid.
2) Slide the cassette lid up to remove it.

Fig. 4-1



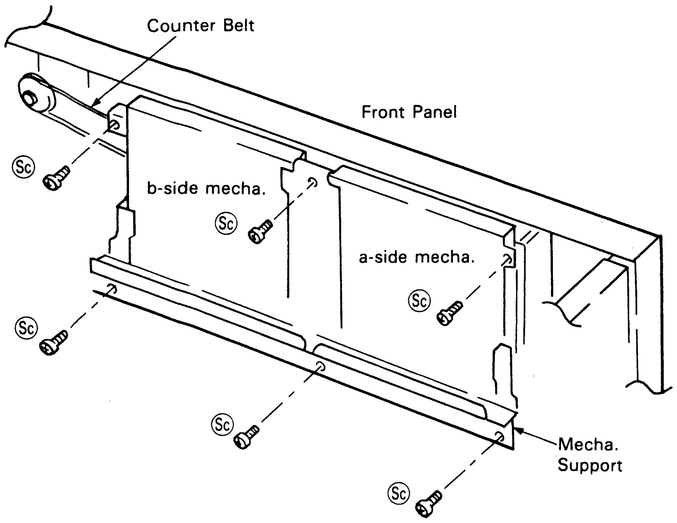
B. Tape Counter Belt (107) (See Exploded View of Mechanism Ass'y on page 17)

1) Remove the cassette lid B of b-side mecha.
2) Loosen the tow screws (78) fixing cassette cover ② of b-side mecha.
3) Take out the tape counter belt (107) from take-up reel ass'y ㉒.

C. Mechanism Ass'y (See Fig. 4-2)

1) Remove the bonnet and the bottom plate.
2) Remove the tension bar. (See Top View on page 19)
3) Remove the tape counter belt from tape counter.
4) Remove the cassette lid and open the cassette case ①.
5) Take out the joint wire and rec spring from seesaw ass'y.
6) Loosen the six screws (Sc) fixing mecha. ass'y (with mecha. support) and remove it from the front panel ass'y.

Fig. 4-2



D. Front Panel Ass'y

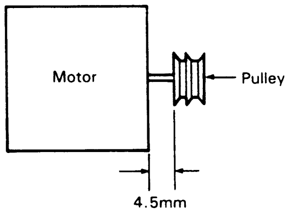
1) Remove the bonnet and the bottom plate.
2) Remove the side panel L and R.
3) Take out the mechanism ass'y.
4) Remove the tape counter from the front panel.
5) Take out the F-5488, F-5490, F-5491 and F-5492 from the front panel ass'y.

E. Driving Arm Ass'y (58), Eject Arm ㊵, Flywheel ㉞ and Motor (74) (See Exploded View of Mechanism Ass'y on page 17)

1) Take out the mecha. ass'y from set.
2) Loosen the screws ㉗ to remove a- or b-side mecha. ass'y from connect plate A ass'y (70).
3) Loosen the two screws (64) fixing motor bracket (72) and remove the motor (74) (with the motor bracket).
4) Remove the washer ㊱ to take out the flywheel ㉞.
5) Loosen the two screws ③ and the screw (88) to remove the back plate ㊲.
6) Take out the eject arm ㊵.
7) Remove the T. spring ㊶ to take out the driving arm ass'y (58).

Note: When installing the pulley to the motor, adjust the gap between the motor and the pulley so as to be about 4.5mm (See Fig. 4-3)

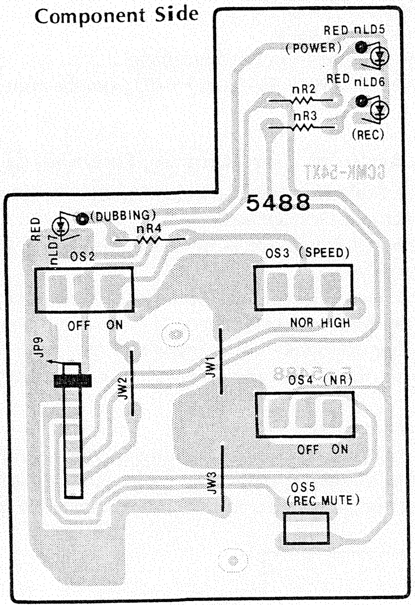
Fig. 4-3



5. PARTS LOCATION ON BOARD

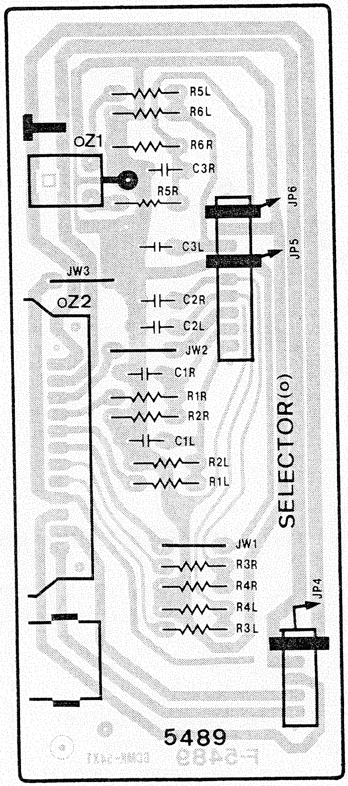
5-1. F-5488 DUBBING, DOLBY NR & REC MUTE Switch Board

Component Side


RED nLD5
(POWER)
RED nLD6
nR2
nR3
(REC)
5488
RED
nLD7
(DUBBING)
nR4
OS2
OFF ON
OS3 (SPEED)
NOR HIGH
JP9
JW2
JW1
OS4 (NR)
OFF ON
JW3
OS5
(REC MUTE)

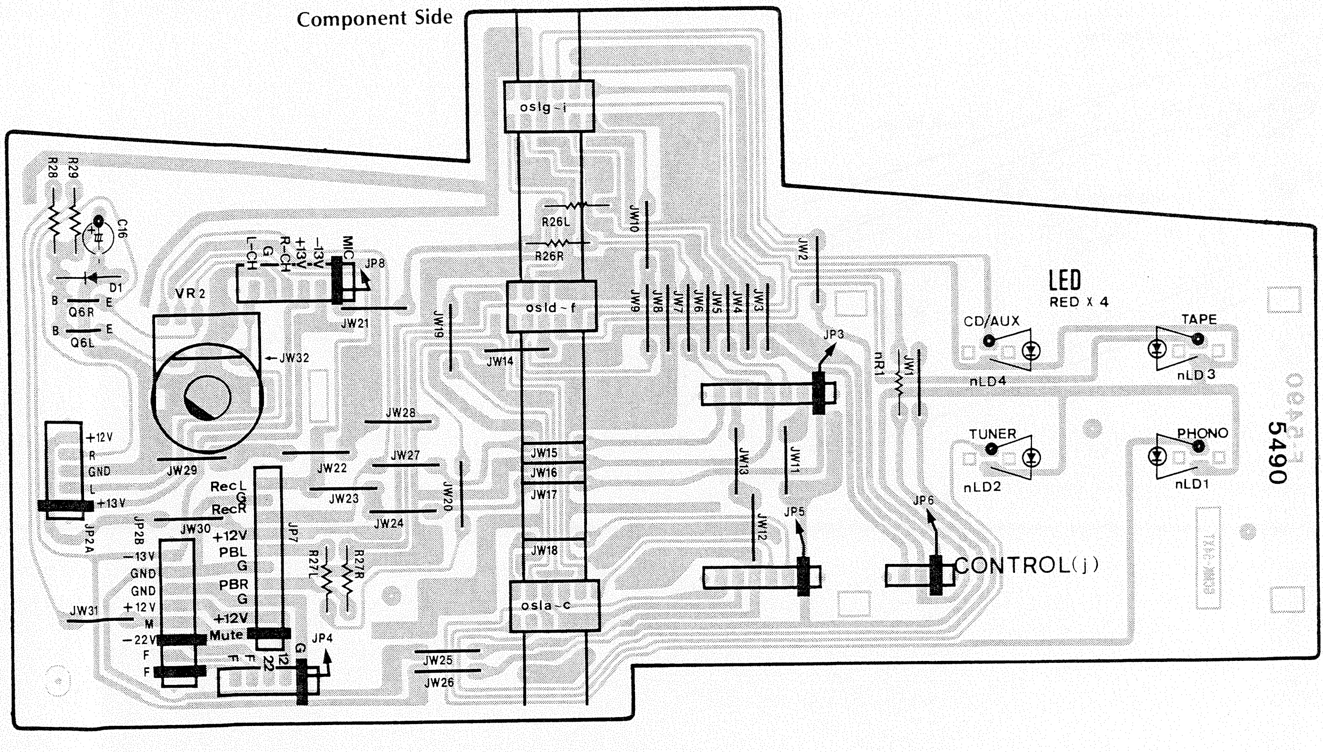
5-2. F-5489 System Control Terminal Board

Component Side


R5L
R6L
oZ1
R6R
C3R
R5R
JP6
C3L
JP5
JW3
oZ2
C2R
C2L
JW2
C1R
R1R
R2R
C1L
R2L
R1L
SELECTOR(o)
JW1
R3R
R4R
R4L
R3L
JP4
5489

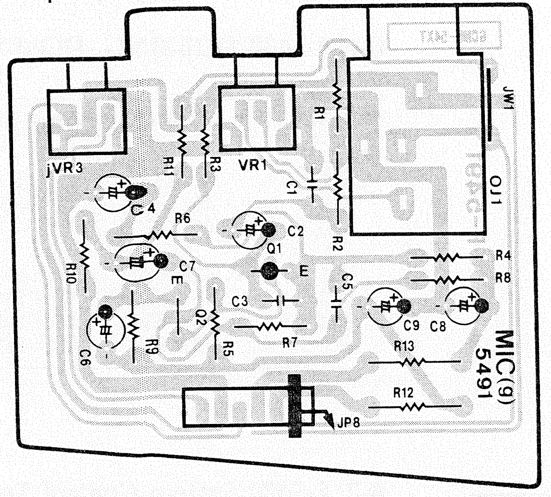
5-3. F-5490 Input Selector Switch Board

Component Side


oslg~i
R28
R29
C16
R26L
R26R
JW10
JW2
MIC
-13V
+13V
R-CH
G
L-CH
JP8
D1
B
E
Q6R
Q6L
VR2
JW21
osld~f
JW9
JW8
JW7
JW6
JW5
JW4
JW3
LED
RED × 4
CD/AUX
TAPE
JW19
JW14
JP3
nR1
JW1
nLD4
nLD3
JW32
JW28
5490
TUNER
PHONO
+12V
R
GND
L
+13V
JW29
JW22
JW27
JW15
JW16
JW17
JW20
JW13
JW11
nLD2
nLD1
RecL
G
RecR
JW23
JW24
JP2B
JP2A
JW30
-13V
GND
GND
+12V
M
-22V
F
F
JW31
+12V
PBL
G
PBR
G
+12V
Mute
JP7
R27L
R27R
JW18
JW12
JP5
JP6
CONTROL(j)
osla~c
JP4
G
22
21
JW25
JW26

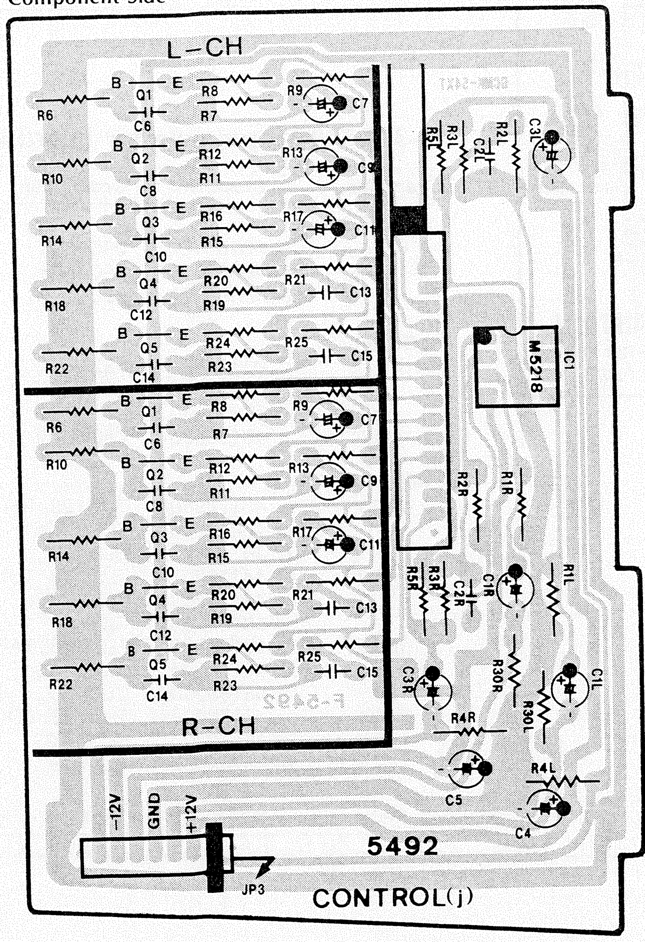
5-4. F-5491 MIC & BALANCE Volume Board

Component Side


VR3
VR1
JW1
OJ1
JP8
MIC(g)
5491

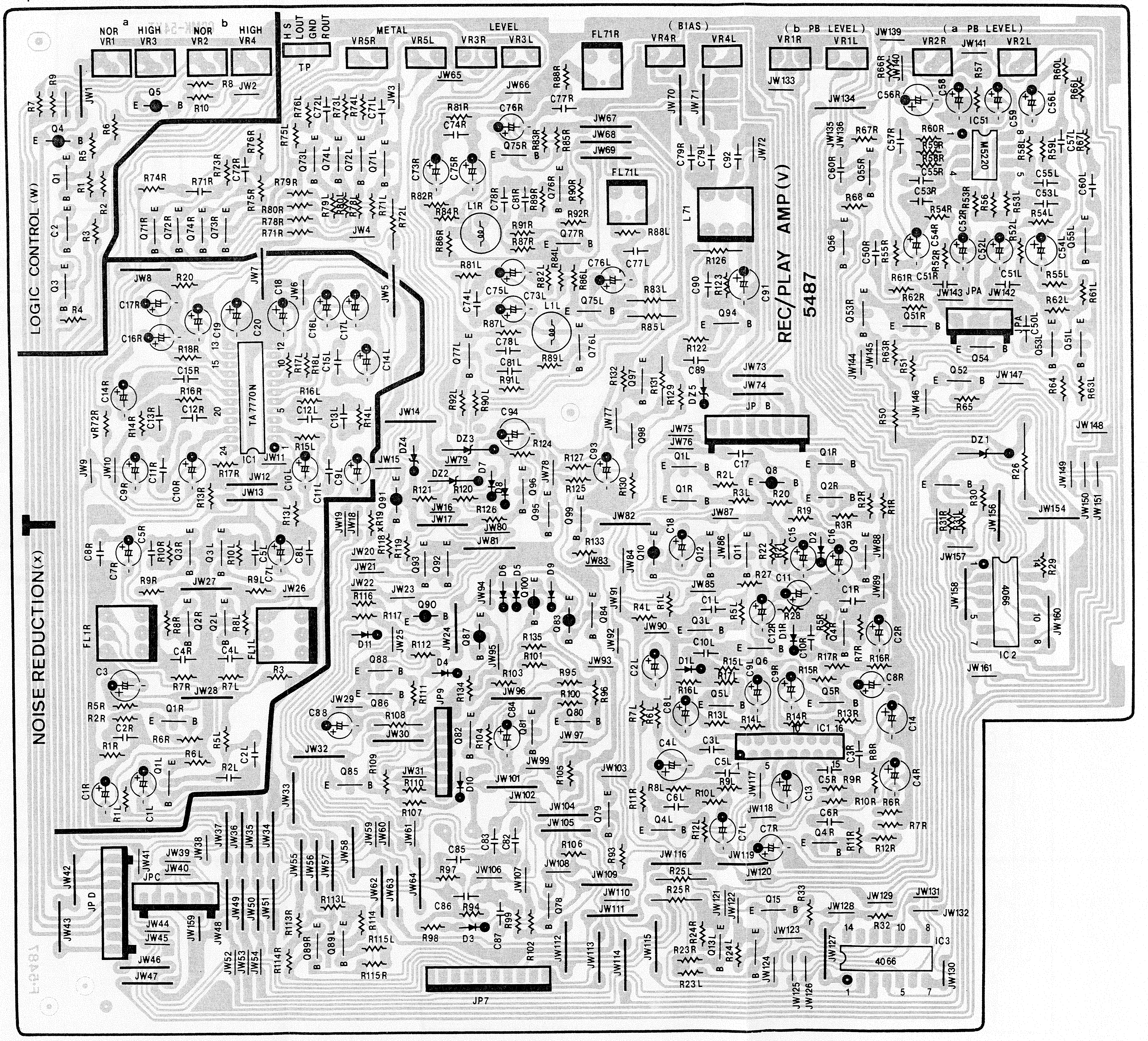
5-5. F-5492 Graphic Equalizer Board

Component Side


L-CH
R-CH
M5218
IC1
5492
CONTROL(j)
JP3
-12V
GND
+12V

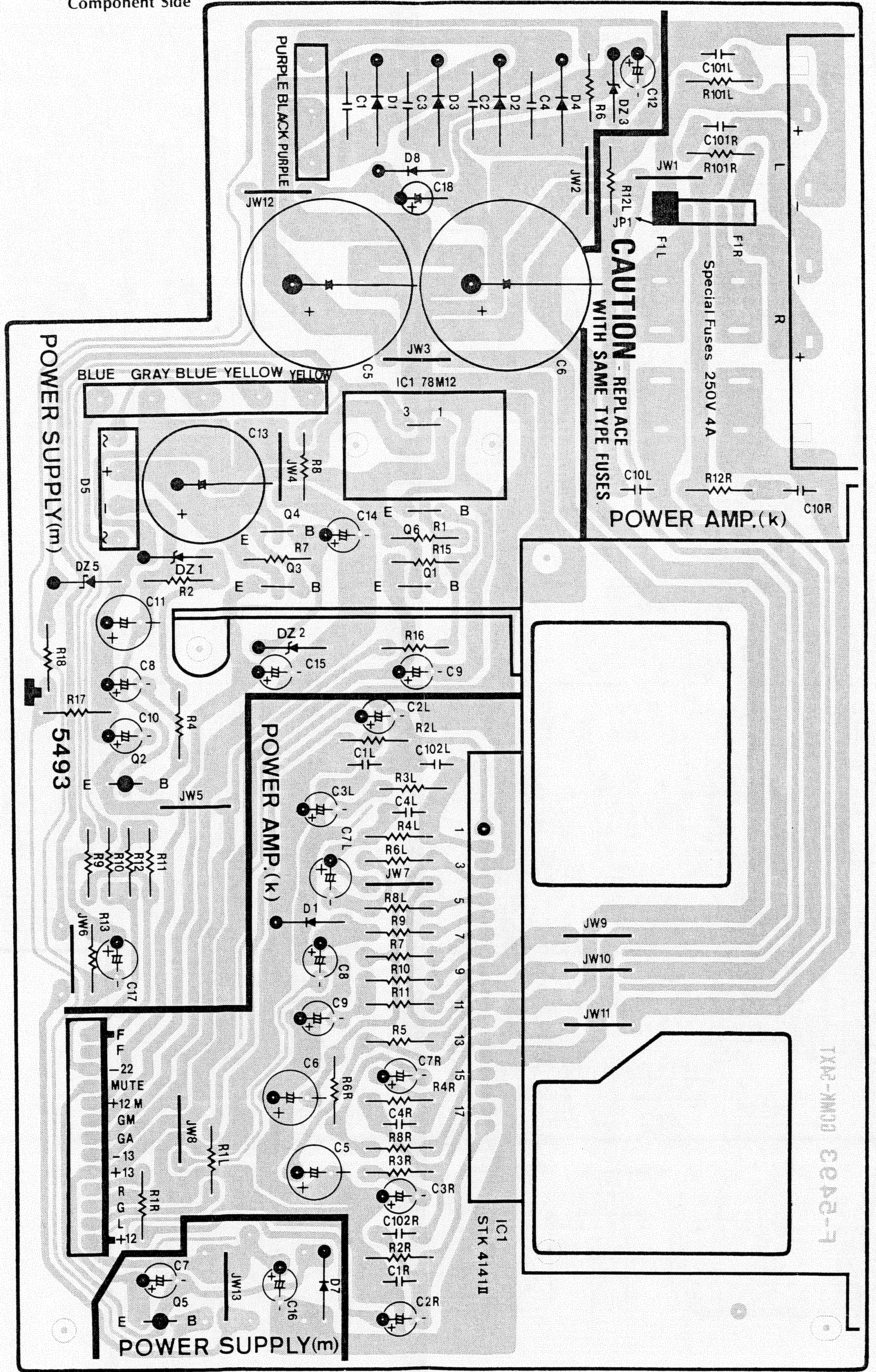
5-6. F-5487 Cassette Deck Amp. Board

Component Side


NOR a VR1
HIGH VR3
NOR b VR2
HIGH VR4
TP
METAL
LEVEL
VR5R
VR5L
VR3R
VR3L
FL71R
(BIAS)
VR4R
VR4L
(b PB LEVEL)
VR1R
VR1L
(a PB LEVEL)
VR2R
VR2L
LOGIC CONTROL (W)
NOISE REDUCTION (x)
REC/PLAY AMP (V)
5487
TA7770N
IC1
M5220
IC51
4066
IC2
IC3
JP7
JPC
JP D
JPA
JP B
FL1R
FL1L
FL71L
L71

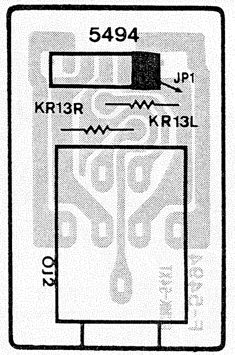
5-7. F-5493 Power Amp. & Power Supply Board

Component Side


PURPLE BLACK PURPLE
C1
D1
C3
D3
C2
D2
C4
D4
R6
DZ3
C12
C101L
R101L
C101R
R101R
D8
C18
JW12
JW2
JW1
R12L
JP1
F1L
F1R
L
R
+
CAUTION - REPLACE WITH SAME TYPE FUSES.
Special Fuses 250V 4A
JW3
C5
C6
IC1 78M12
3 1
POWER SUPPLY(m)
BLUE GRAY BLUE YELLOW YELLOW
C13
JW4
R8
D5
Q4
C14
E B
Q6
R1
R15
Q1
R7
Q3
DZ5
DZ1
R2
C10L
R12R
C10R
POWER AMP.(k)
C11
DZ2
C15
R16
C9
R18
C8
R17
C10
R4
Q2
5493
JW5
C2L
R2L
C1L
C102L
R3L
C3L
C4L
R4L
C7L
R6L
JW7
R8L
D1
R9
R7
R10
R11
R5
C8
C9
R9
R10
R12
R11
JW6
R13
C17
JW9
JW10
JW11
F
F
-22
MUTE
+12 M
GM
GA
-13
+13
R
G
L
+12
JW8
R1L
R1R
C6
R6R
C7R
R4R
C4R
R8R
C5
R3R
C3R
C102R
R2R
C1R
C2R
IC1 STK 4141Ⅱ
1
3
5
7
9
11
13
15
17
C7
Q5
JW13
C16
D7
E B
POWER SUPPLY(m)
F-5493 DOMK-2AST

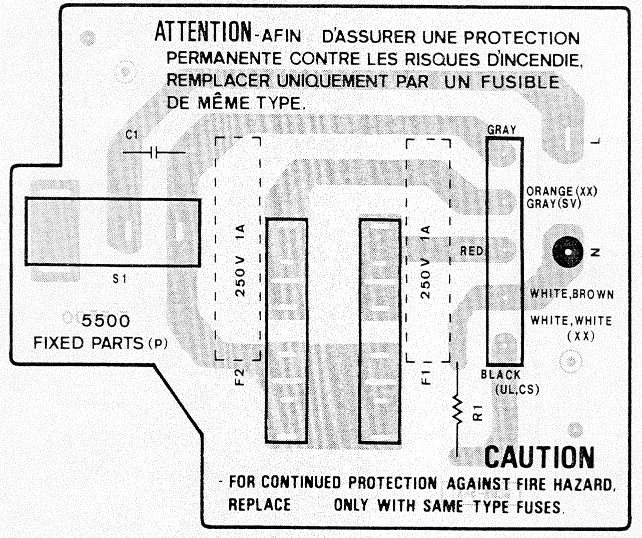
5-8. F-5494 PHONES Jack Board

Component Side


5494
JP1
KR13R
KR13L
O12

5-9. F-5500 POWER Switch Board

Component Side


ATTENTION-AFIN D'ASSURER UNE PROTECTION PERMANENTE CONTRE LES RISQUES D'INCENDIE, REMPLACER UNIQUEMENT PAR UN FUSIBLE DE MÊME TYPE.
C1
S1
5500
FIXED PARTS (P)
250V 1A
F2
250V 1A
F1
GRAY
L
ORANGE (XX)
GRAY (SV)
RED
N
WHITE, BROWN
WHITE, WHITE (XX)
BLACK (UL,CS)
R1
CAUTION
- FOR CONTINUED PROTECTION AGAINST FIRE HAZARD, REPLACE ONLY WITH SAME TYPE FUSES.

6. ELECTRICAL PARTS LIST OF BOARD

6-1. F-5488 DUBBING, DOLBY NR REC MUTE Switch Board

Parts No.	Stock No.	Description
•LED		
nLD5	46176900	TLS-123, POWER
nLD6	46176900	TLS-123, REC
nLD7	46176900	TLS-123, DUBBING
oS2	48316300	Slide SW., DUBBING
oS3	48316300	Slide SW., DUBBING SPEED
oS4	48316300	Slide SW., DOLBY NR
oS5	46708100	Push SW., REC MUTE

6-2. F-5489 System Control Terminal Board

Parts No.	Stock No.	Description
oZ2	48582200	13P ST Socket, system control
oZ1	48528400	2P Terminal, CD/AUX

6-3. F-5490 Input Selector Board (Stock No. 00998801)

Parts No.	Stock No.	Description
•Transistor		
jQ6	46367101	2SC2603
	or 46367301	2SC2458
	or 48058801	2SC1740S
•Diode		
jD1	03117600	1S2473T77
	or 46086000	1S1588TP-3
jVR2	48139800	150kΩ (B) V.R., VOLUME
•LED		
nLD1	46176900	TLS-123, PHONO
	or 46470200	SEL2210S
	or 48189000	GL3HD8
nLD2	46176900	TLS-123, TUNER
	or 46470200	SEL2210S
	or 48189000	GL3HD8
nLD3	46176900	TLS-123, TAPE
	or 46470200	SEL2210S
	or 48189000	GL3HD8
nLD4	46176900	TLS-123, CD/AUX
	or 46470200	SEL2210S
	or 48189000	GL3HD8
oS1	48587200	Push SW., Input Selector

6-4. F-5491 MIC & BALANCE Volume Board

Parts No.	Stock No.	Description
•Transistor		
gQ1	46926101	2SA1174
gQ2	46926201	2SC2784
gVR1	48345900	20kΩ (A) V.R., MIC MIXING
jVR3	48345800	250kΩ V.R., BALANCE
oJ1	07219700	Jack, MIC

6-5. F-5492 Graphic Equalizer Board
(Stock No. 00999001)

Parts No.	Stock No.	Description
•Transistor		
jQ1	46367101	2SC2603
	or 46367301	2SC2458
	or 48058801	2SC1740S
jQ2	46367101	2SC2603
	or 46367301	2SC2458
	or 48058801	2SC1740S
jQ3	46367101	2SC2603
	or 46367301	2SC2458
	or 48058801	2SC1740S
jQ4	46367101	2SC2603
	or 46367301	2SC2458
	or 48058801	2SC1740S
jQ5	46367101	2SC2603
	or 46367301	2SC2458
	or 48058801	2SC1740S
•IC		
jIC1	46673800	M5218P

6-6. F-5487 Cassette Deck Recording/Playback Amp. Board
(Stock No. 00998501)

Parts No.	Stock No.	Description
•Transistor		
vQ1	46581701	2SC1845
vQ2	46581701	2SC1845
vQ3	46359801	2SC2001
vQ4	46367101	2SC2603
	or 46367301	2SC2458
	or 48058801	2SC1740S
vQ5	46367101	2SC2603
	or 46367301	2SC2458
	or 48058801	2SC1740S
vQ6	46367101	2SC2603
	or 46367301	2SC2458
	or 48058801	2SC1740S
vQ8	46581601	2SA992
vQ9	48230200	DTC124XS
vQ10	48229200	DTA124XS
vQ11	48230200	DTC124XS
vQ12	48230200	DTC124XS
vQ13	46367101	2SC2603
	or 46367301	2SC2458
	or 48058801	2SC1740S
vQ14	46367101	2SC2603
	or 46367301	2SC2458
	or 48058801	2SC1740S
vQ15	46367101	2SC2603
	or 46367301	2SC2458
	or 48058801	2SC1740S

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Parts No.	Stock No.	Description
vQ51	46367101	2SC2603
	or 46367301	2SC2458
	or 48058801	2SC1740S
vQ52	46367101	2SC2603
	or 46367301	2SC2458
	or 48058801	2SC1740S
vQ53	48223100	DTC114TS
vQ54	46367101	2SC2603
	or 46367301	2SC2458
	or 48058801	2SC1740S
vQ55	48230200	DTC124XS
vQ56	48223100	DTC114TS
vQ71	46367101	2SC2603
	or 46367301	2SC2458
	or 48058801	2SC1740S
vQ72	46367101	2SC2603
	or 46367301	2SC2458
	or 48058801	2SC1740S
vQ73	46367101	2SC2603
	or 46367301	2SC2458
	or 48058801	2SC1740S
vQ74	46367101	2SC2603
	or 46367301	2SC2458
	or 48058801	2SC1740S
vQ75	46367101	2SC2603
	or 46367301	2SC2458
	or 48058801	2SC1740S
vQ76	46367101	2SC2603
	or 46367301	2SC2458
	or 48058801	2SC1740S
vQ77	46367101	2SC2603
	or 46367301	2SC2458
	or 48058801	2SC1740S
vQ78	48230200	DTC124XS
vQ79	48230200	DTC124XS
vQ80	46367101	2SC2603
	or 46367301	2SC2458
	or 48058801	2SC1740S
vQ81	48230200	DTC124XS
vQ82	46367101	2SC2603
	or 46367301	2SC2458
	or 48058801	2SC1740S
vQ83	48229200	DTA124XS
vQ84	46367101	2SC2603
	or 46367301	2SC2458
	or 48058801	2SC1740S
vQ85	48230200	DTC124XS
vQ86	46367101	2SC2603
	or 46367301	2SC2458
	or 48058801	2SC1740S
vQ87	48229200	DTA124XS
vQ88	46367101	2SC2603
	or 46367301	2SC2458
	or 48058801	2SC1740S
vQ89	46367101	2SC2603
	or 46367301	2SC2458
	or 48058801	2SC1740S
vQ90	46367001	2SA1115
	or 46367201	2SA1048
	or 48058601	2SA933S
vQ91	46367001	2SA1115
	or 46367201	2SA1048
	or 48058601	2SA933S
vQ92	48223100	DTC114TS
vQ93	48223100	DTC114TS
vQ94	46614101	2SC3243
	or 46725801	2SC1627A
vQ95	46367101	2SC2603
	or 46367301	2SC2458
	or 48058801	2SC1740S
vQ96	46367101	2SC2603
	or 46367301	2SC2458
	or 48058801	2SC1740S

to be continued ►

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Parts No.	Stock No.	Description
vQ97	46614101	2SC3243
vQ98	46367101	2SC2603
	or 46367301	2SC2458
	or 48058801	2SC1740S
vQ99	46367101	2SC2603
	or 46367301	2SC2458
	or 48058801	2SC1740S
vQ100	48229200	DTA124XS
•IC		
vIC1	48365900	M51542L
vIC2	07224800	TC4066BP
	or 46421000	μPD4066BC
	or 48054500	MSM4066BRS
	or 48063800	BU4066B
vIC3	07224800	TC4066BP
	or 46421000	μPD4066BC
	or 48054500	MSM4066BRS
	or 48063800	BU4066B
vIC51	46638700	M5220P
•Diode		
vD1	46464100	1SS133
vD2	46464100	1SS133
vD3	46464100	1SS133
vD4	46464100	1SS133
vD5	46464100	1SS133
vD6	46464100	1SS133
vD7	46464100	1SS133
vD8	46464100	1SS133
vD9	46464100	1SS133
vD10	46464100	1SS133
vD11	46464100	1SS133
•Zener Diode		
vDZ1	46112900	05Z9.1-X
	or 46113000	05Z9.1-Y
	or 46113100	05Z9.1-Z
vDZ2	46111100	05Z5.1-X
	or 46111200	05Z5.1-Y
	or 46111300	05Z5.1-Z
vDZ3	46111100	05Z5.1-X
	or 46111200	05Z5.1-Y
	or 46111300	05Z5.1-Z
vDZ4	48552000	MTZ5.1AT-77
	or 48552100	MTZ5.1BT-77
	or 48552200	MTZ5.1CT-77
vDZ5	48550200	MTZ2.4AT-77
	or 48550300	MTZ2.4BT-77
	or 48628000	RD2.4B ES
	or 48628100	RD2.4B1 ES
	or 48628200	RD2.4B2 ES
vC3	48663500	560pF 50V C.C.
vC7	46928500	10μF 16V E.C.
vC8	46928500	10μF 16V E.C.
vC9	46931200	1μF 50V E.C.
vC12	46928500	10μF 16V E.C.
vC15	46928500	10μF 16V E.C.
vC16	46928500	10μF 16V E.C.
vC18	46931500	3.3μF 50V E.C.
vC56	46928500	10μF 16V E.C.
vC59	46928500	10μF 16V E.C.
vC73	46931200	1μF 50V E.C.
vC76	46931500	3.3μF 50V E.C.
vC78	46695500	0.013μF 50V F.C.
vC84	46928500	10μF 16V E.C.
vC88	46931200	1μF 50V E.C.
vC92	46657800	8200pF 100V F.C.
vC93	46928500	10μF 16V E.C.
vFL71	48497900	Trap Filter
vL1	48594700	Inductor
vL71	48497800	OSC Coil

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Parts No.	Stock No.	Description
vVR1	48078800	2.2kΩ S.V.R., P.B level adj., b-side
	or 48278300	2kΩ (B) S.V.R.,
vVR2	48078300	330Ω S.V.R., P.B level adj., a-side
vVR3	48079600	47kΩ S.V.R., Rec level adj., b-side
vVR4	48079800	100kΩ S.V.R., Bias adj., b-side
	or 48278800	100kΩ (B) S.V.R.,
vVR5	48079600	47kΩ S.V.R., Metal rec level adj., b-side
•Transistor		
wQ1	48230200	DTC124XS
wQ2	46367101	2SC2603
	or 46367301	2SC2458
	or 48058801	2SC1740S
wQ3	46367101	2SC2603
	or 46367301	2SC2458
	or 48058801	2SC1740S
wQ4	46367001	2SA1115
	or 46367201	2SA1048
	or 48058601	2SA933S
wQ5	46367001	2SA1115
	or 46367201	2SA1048
	or 48058601	2SA933S
wVR1	48278200	1kΩ (B) S.V.R., Normal speed adj., a-side
wVR2	48278200	1kΩ (B) S.V.R., Normal speed adj., b-side
wVR3	48078700	1.5kΩ S.V.R., High speed adj., a-side
wVR4	48078700	1.5kΩ S.V.R.,High speed adj., b-side
•Transistor		
xQ1	46367101	2SC2603
	or 46367301	2SC2458
	or 48058801	2SC1740S
xQ2	46367101	2SC2603
	or 46367301	2SC2458
	or 48058801	2SC1740S
xQ3	46367101	2SC2603
	or 46367301	2SC2458
	or 48058801	2SC1740S
•IC		
xIC1	48519800	TA7770N
xC1	46931200	1μF 50V E.C.
xC4	48663600	680pF 50V C.C.
xC5	48663600	680pF 50V C.C.
xC7	46931600	4.7μF 50V E.C.
xC9	46928500	10μF 16V E.C.
xC10	46928500	10μF 16V E.C.
xC14	46928500	10μF 16V E.C.
xC16	46930600	0.1μF 50V E.C.
xC17	46931000	0.47μF 50V E.C.
xC19	46931600	4.7μF 50V E.C.
xFL1	48715000	Dolby Filter

6-7. F-5493 Power Amp. & Power Supply Board
(Stock No. 00999101)

Parts No.	Stock No.	Description
⚠kIC1	46563100	STK4141-II
•Diode		
kD1	03117600	1S2473T77
	or 46086000	1S1588TP-3
kC10	46283700	0.047µF 50V F.C.
⚠kF1	04336300	QA Fuse 4.0A 250V
⚠kR5	46229000	100Ω 1/2W N.I.R.
⚠kR6	46230600	2.2kΩ 1/2W N.I.R.
⚠kR7	46229000	100Ω 1/2W N.I.R.
⚠kR10	46230200	1kΩ 1/2W N.I.R.
⚠kR11	46230200	1kΩ 1/2W N.I.R.
⚠kR12	46227800	10Ω 1/2W N.I.R.
⚠kR13	46229400	220Ω 1/2W N.I.R.
•Transistor		
⚠mQ1	48150101	2SD1406
⚠	or 48508801	2SC3851
⚠	or 48509401	2SD1761
⚠mQ2	46359701	2SA952
⚠	or 46614001	2SA1283
⚠	or 48000801	2SA934
⚠mQ3	48150101	2SD1406
⚠	or 48508801	2SC3851
⚠	or 48509401	2SD1761
mQ4	46367101	2SC2603
	or 46367301	2SC2458
	or 48058801	2SC1740S
mQ5	46367001	2SA1115
	or 46367201	2SA1048
	or 48058601	2SA933S
mQ6	46367101	2SC2603
	or 46367301	2SC2458
	or 48058801	2SC1740S
•IC		
⚠mIC1	48470100	µPC78M12H
⚠	or 48566000	AN78M12
•Diode		
⚠mD1	03117700	10E-2
⚠mD2	03117700	10E-2
⚠mD3	03117700	10E-2
⚠mD4	03117700	10E-2
⚠mD5	03117000	RB152-LFF
mD7	03117600	1S2473T77
	or 46086000	1S1588TP-3
mD8	03117700	10E-2
•Zener Diode		
mDZ1	46114300	05Z13-Z
	or 46828000	RD15E-B1
mDZ2	46114200	05Z13-Y
	or 46827900	RD13E-B3
mDZ3	46115800	05Z22-Z
	or 46829700	RD24E-B1
mDZ5	46114300	05Z13-Z
	or 46828000	RD15E-B1
⚠mR1	46230100	820Ω 1/2W N.I.R.
⚠mR2	46230100	820Ω 1/2W N.I.R.
⚠mR6	46250800	1.8kΩ 1W N.I.R.
⚠mR7	46250400	820Ω 1W N.I.R.
mC1	08680400	0.01µF 500V C.C.
mC2	08680400	0.01µF 500V C.C.
mC3	08680400	0.01µF 500V C.C.
mC4	08680400	0.01µF 500V C.C.
mC5	46190500	3300µF 45V E.C.
mC6	46190500	3300µF 45V E.C.
oZ3	46549200	4P Speaker Terminal

6-8. F-5494 PHONES Jack Board

Parts No.	Stock No.	Description
oJ2	24306200	Jack, PHONES

6-9. F-5500 POWER Switch Board

Parts No.	Stock No.	Description
⚠pR1	00048100	3.3MΩ 1/2W S.R. (UL & CSA)
⚠pC1	46425800	0.01µF 400V C.C.
⚠	or 46943200	0.01µF 400V C.C.
⚠	or 48186700	0.01µF 400V C.C.
⚠pF1	48721100	250V 1A AC Fuse (XX-V)
⚠	48721300	250V 2A AC Fuse (UL, CSA)
⚠	07184700	250V 1A AC Fuse (EU, UK, AS and SEV)
⚠pF2	48721100	250V 1A AC Fuse (XX-V)
⚠	07184400	250V 0.5A AC Fuse (SEV)
⚠pS1	46413900	Push SW., POWER

7. EXPLODED VIEW OF MECHANISM ASS'Y & PARTS LIST

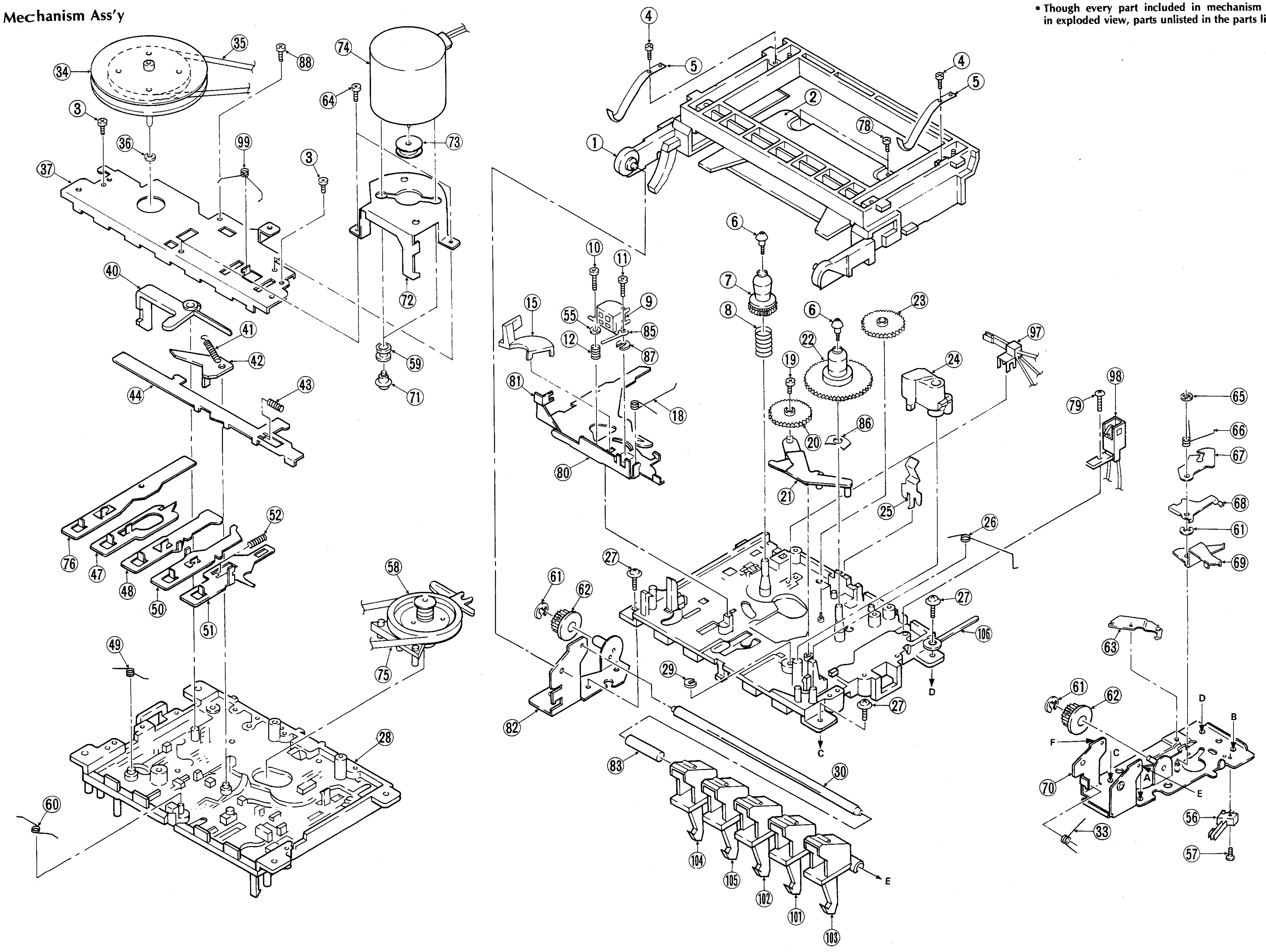
Parts List <a- and b-side mechanism>

Parts No.	Stock No.	Description
1	37085700	Cassette Holder
2	37085800	Mechanism Cover
3	37085900	M2.6x6 Binding Head Tapping Screw
4	09418300	M2x5 Binding Head Tapping Screw
5	09416100	Keep Plate
6	37086000	S. Screw, Reel
7	37086100	Supply Reel
8	37086200	C. Spring
9	37086300	REC/P.B Head
10	37086400	Azimuth Adjusting Screw
11	37086500	M2x3, Pan Head Screw
12	37086600	Head Adjusting Spring
13	37086700	Erase Head (b-side mecha.)
14	37086800	M2x5, Binding Head Screw, erase head
15	37086900	Tape Sensor
16	———	Head Base plate (b-side mecha.)
17	37087000	Interlock Arm (b-side mecha.)
18	37087100	Pinch Arm Spring
19	37087200	S. Screw, idler
20	37087300	Idler Gear
21	37087400	Idler Arm
22	37087500	Take-Up Reel Ass'y
23	37087600	F. Gear
24	37087700	Pinch Roller Ass'y
25	37087800	Cassette Holder Spring
26	37087900	Earth Spring
27	37088000	M2.6x6, Flanged Head Screw
28	37088100	Chassis Ass'y
29	37088200	N. Washer
30	———	Button Shaft
32	———	Button Bracket R
33	37088300	Spring
34	37088400	Flywheel Ass'y
35	37088500	Capstan Belt
36	37088600	P. Washer
37	———	Back Plate
38	37088700	Spring
39	37088800	Spring
40	37088900	Eject Arm
41	37089000	Spring
42	———	S. Arm.
43	37089100	C. Spring
44	———	Function Lever
45	37089200	Pause Arm
46	———	Pause Lever
47	———	S.E Lever
48	———	F.F Lever
49	37089300	Spring
50	———	REW Lever
51	———	Play Lever
52	37089400	C. Spring
53	———	Rec Stop Lever
54	———	Rec Lever
55	37089500	F. Washer
56	37089600	Leaf Switch
57	37089700	M2x8, Bind Head Screw
58	37089800	Driving Arm Ass'y
59	47001100	Rubber Cushion
60	37089900	Spring
61	37090000	E. Ring
62	37090100	Gear
63	———	Connect Lever Ass'y
64	37090200	M2x4, Pan Head Screw
65	———	CS Ring
66	———	Spring
67	———	Lock Plate
68	———	Unlock Plate
69	———	Connect Lever
70	———	Connect Plate A Ass'y
71	47001200	Motor Screw
72	———	Motor Bracket
73	37090300	Motor Pulley
74	37090400	Motor
75	37090500	Drive Belt
76	———	Pause Lever
77	———	RSW Plate
78	37090600	M2.6x6, Binding Head Tapping Screw
79	37085900	M2.6x6, Binding Head Tapping Screw
80	———	Head Base
81	37090700	Tape Guide
82	———	Button Bracket L Ass'y
83	———	Spacer (a-side mecha.)
85	37100400	Lug Plate
86	37090900	Plate
87	37091000	Spacer
88	37091100	S. Screw, back plate
97	37091200	Leaf Switch
98	37091300	Leaf Switch
99	37091400	Spring
100	37100500	Rec Button (b-side mecha.)
101	37100900	Stop Button
102	37100800	F.F Button
103	37101000	Pause Button
104	37100600	Play Button
105	37100700	REW Button
107	37101100	Counter Belt (b-side mecha.)

•Note: Parts without Stock numbers are not supplied even parts names are listed in the parts list.

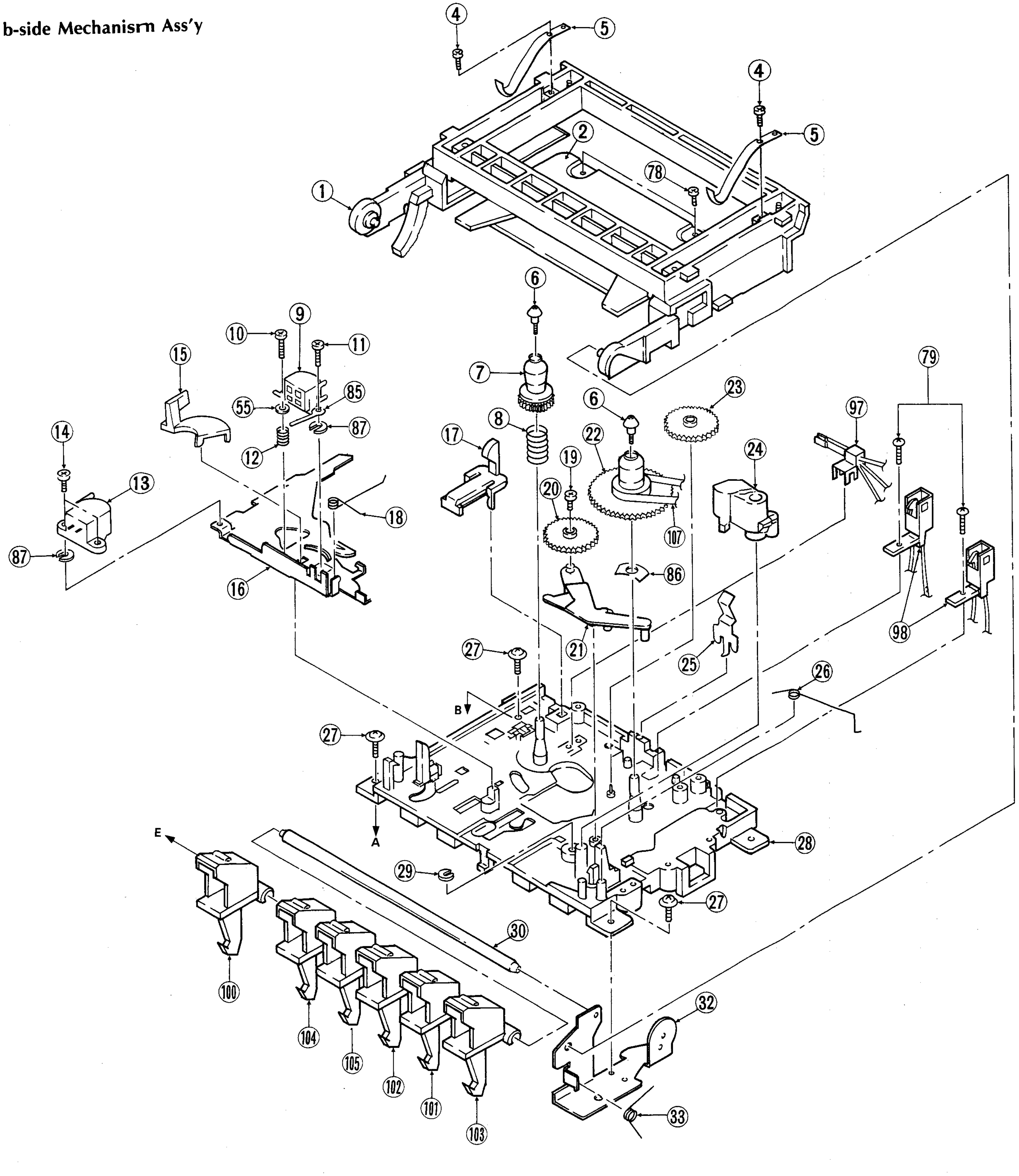
7-1. a-side Mechanism Ass'y

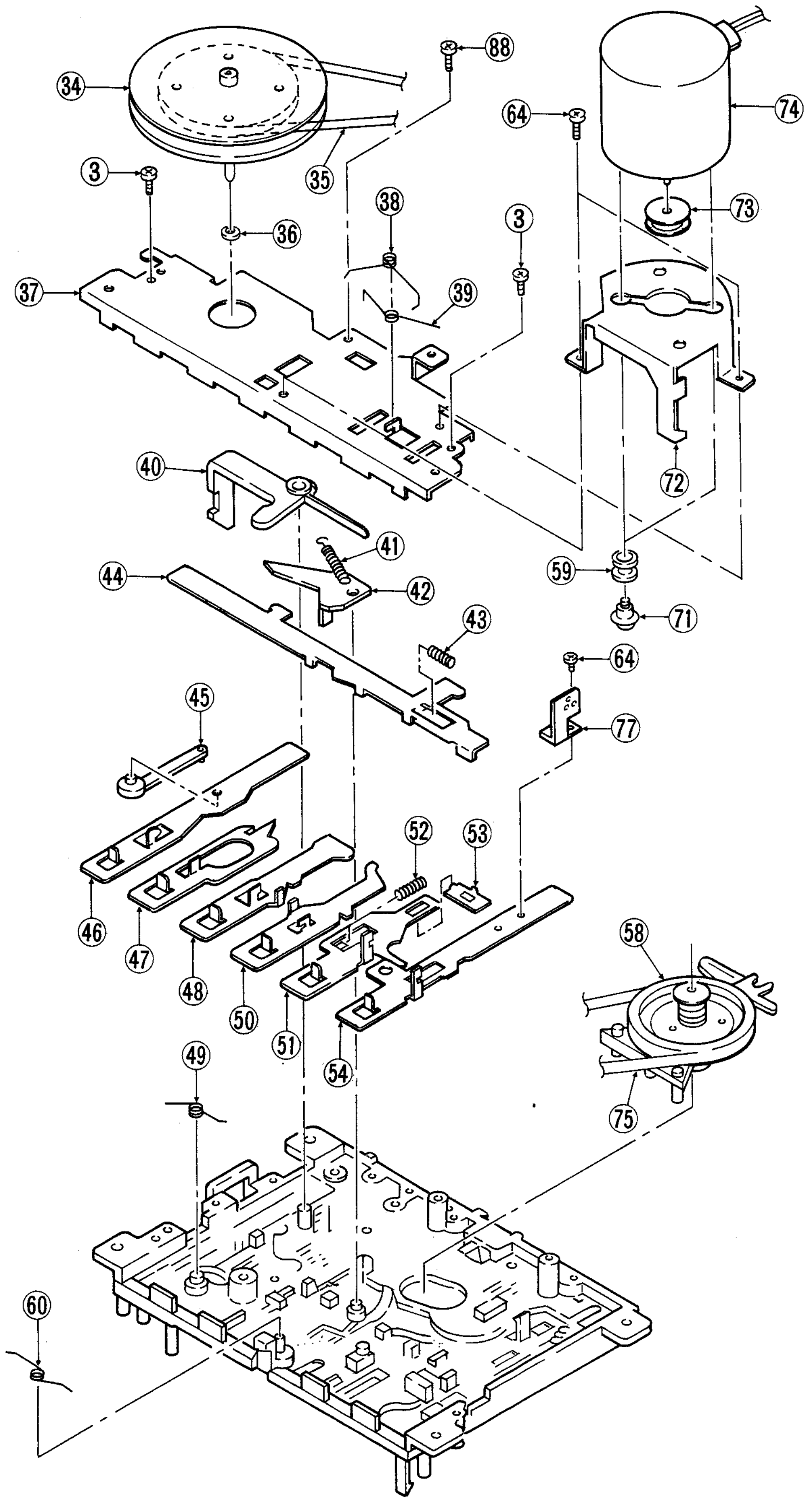
- Though every part included in mechanism ass'y is numbered in exploded view, parts unlisted in the parts list are not supplied.


35
34
88
74
3
64
36
73
99
37
3
72
40
41
42
59
43
44
71
52
76
47
48
50
51
58
75
49
28
60
4
5
4
5
2
78
1
6
10
11
15
9
7
55
85
8
6
23
12
87
22
97
19
24
81
18
86
98
65
79
20
66
80
21
67
25
26
68
61
69
27
61
62
27
106
D
63
29
82
27
C
61
62
D
B
F
C
A
70
E
83
30
56
33
57
104
105
102
101
103
E

7-2. b-side Mechanism Ass'y

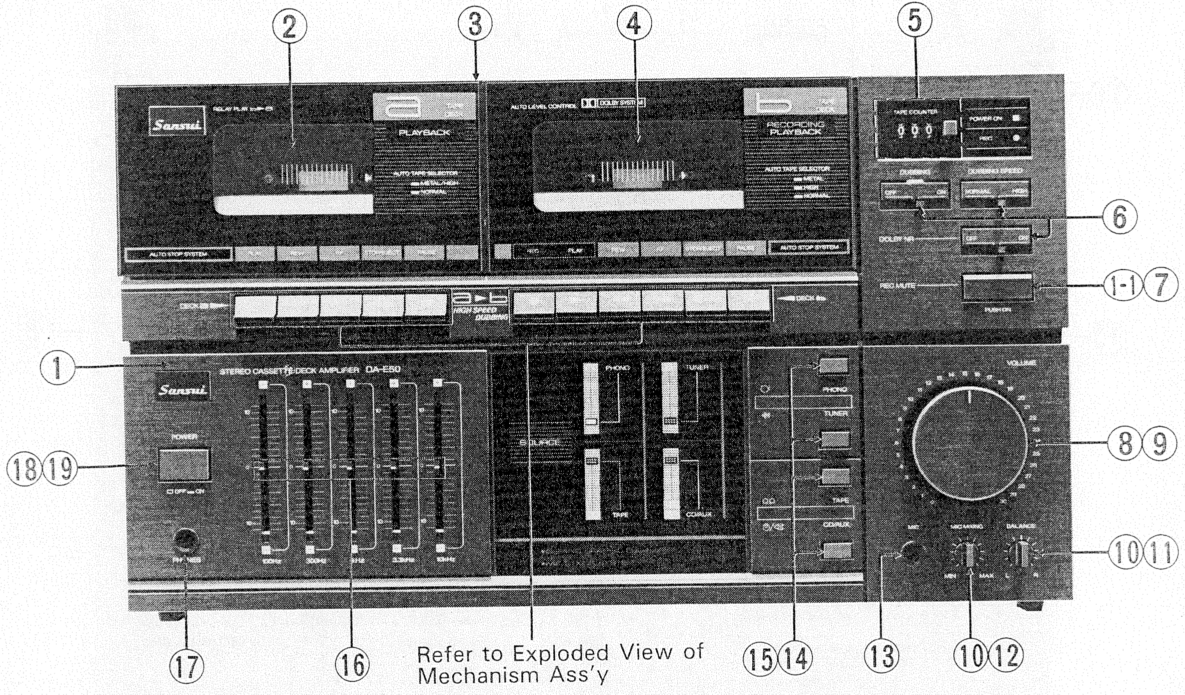
- Though every part included in mechanism ass'y is numbered in exploded view, parts unlisted in the parts list are not supplied.


④
⑤
④
⑤
②
(78)
①
⑥
⑦
⑧
⑨
⑩
⑪
⑮
(55)
(85)
(87)
⑫
⑭
⑬
⑱
(87)
⑯
⑥
㉒
㉓
⑲
⑳
⑰
㉔
(97)
(79)
(107)
(86)
㉑
㉗
㉕
㉖
(98)
B
㉗
A
E
㉙
㉘
㉗
㉚
(100)
(104)
(105)
(102)
(101)
(103)
㉜
㉝


㉞
(88)
(64)
(74)
③
㉟
㊱
㊳
③
(73)
㊲
㊴
(72)
㊵
㊶
(59)
㊹
㊷
(71)
㊸
(64)
(77)
㊺
(52)
(53)
(58)
㊻
㊼
㊽
㊿
(51)
㊾
(54)
(75)
(60)

8. OTHER PARTS

8-1. Front View & Parts List

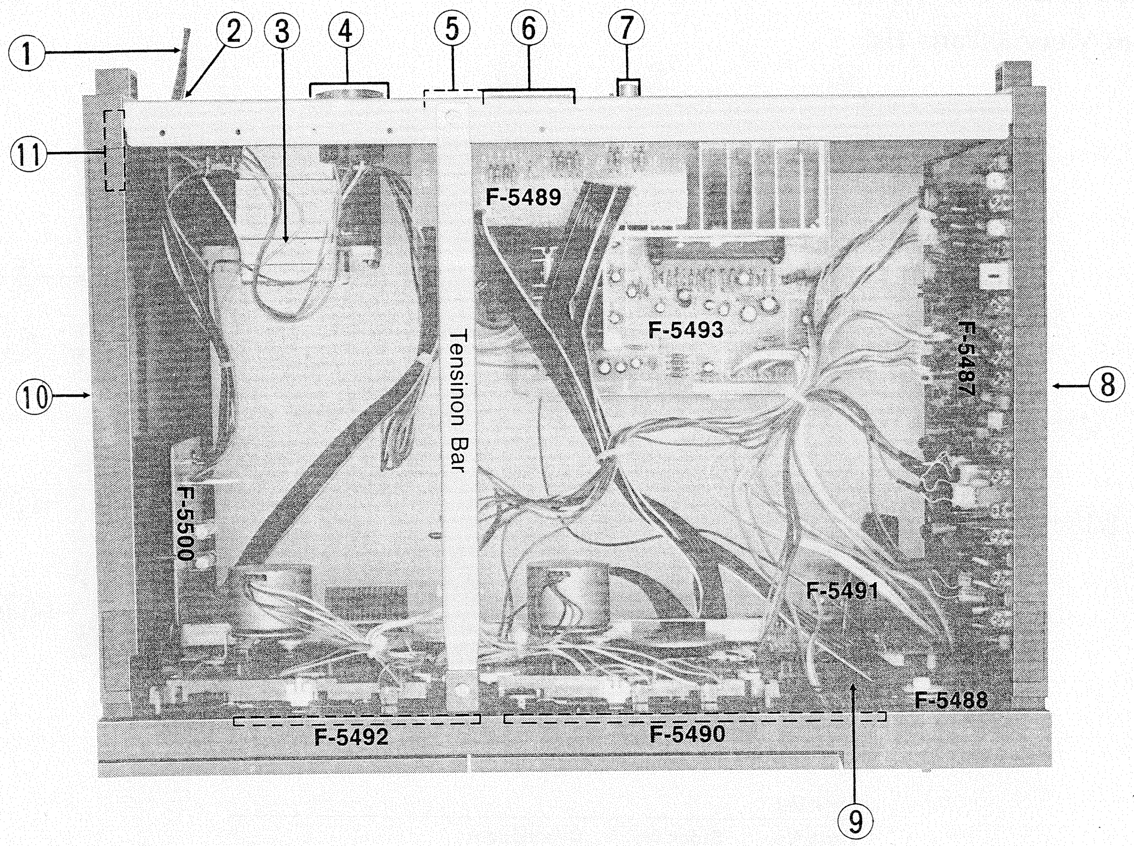


Refer to Exploded View of Mechanism Ass'y

Parts List

Parts No.	Stock No.	Description
1	27231600	Front Panel Ass'y
2	27261500	a-side Cassette Lid Ass'y
3	27231500	Bonnet
4	27261600	b-side Cassette Lid Ass'y
5	48485200	Tape Counter
6	48316300	Slide SW., DUBBING·DOLBY NR
7	46708100	Push SW., REC MUTE
8	48139800	150kΩ (B) V.R., VOLUME
9	27084000	Knob, VOLUME
10	47683600	Knob, MIC MIXING·BALANCE
11	48345800	250kΩ V.R., BALANCE
12	48345900	20kΩ (A) V.R., MIC MIXING
13	07219700	Jack, MIC
14	48587200	Push SW., Input Selector
15	27232500	Push Knob, Input Selector
16	48520500	50kΩ Volume Ass'y, Graphic Equalizer
17	24306200	Jack, PHONES
⚠18	46413900	Push SW., POWER
	27039800	Push Knob, POWER

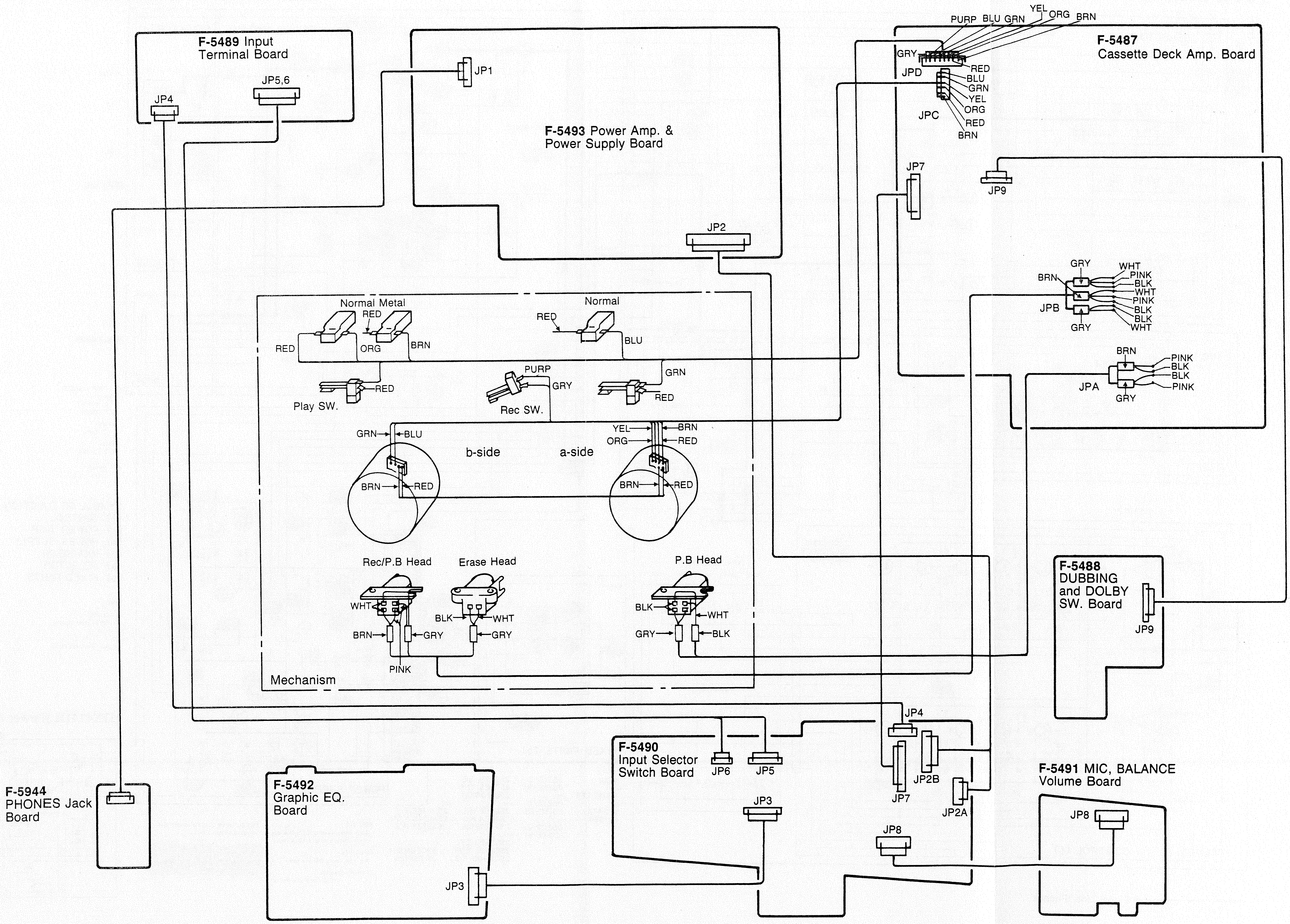
8-2. Top View & Parts List



Parts List

Parts No.	Stock No.	Description
⚠ 1	38004700	Power Supply Cord (XX-V)
⚠	48187500	Power Supply Cord-polarized (XX-V)
⚠	38004500	Power Supply Cord (EU & SEV)
⚠	38004300	Power Supply Cord (UK)
⚠	07204200	Power Supply Cord (AS)
⚠	48187800	Power Supply Cord-polarized (UL & CSA)
⚠ 2	46364900	AC Outlet (XX-V)
⚠	48184000	AC Outlet-polarized (XX-V, UL & CSA)
⚠	46161000	AC Outlet (EU & SEV)
⚠	46364800	AC Outlet (UK)
⚠	46580600	AC Outlet (AS)
⚠ 3	15026309	Power Transformer (XX-V)
⚠	15026302	Power Transformer (UL & CSA)
⚠	15026305	Power Transformer (EU, UK, AS & SEV)
⚠ 4	48175200	Voltage Selector (XX-V)
⚠	07204700	Slide SW., voltage selector (EU, UK, AS & SEV)
5	46549200	4P Speaker Terminal
6	48582200	13P ST Socket, system control
7	48528400	2P Input Terminal, CD/AUX
8	27233500	Side Panel Ass'y (R)
9	37092100	Tape Counter Belt
10	27233400	Side Panel Ass'y (L)
11	47390300	AC Cord Cover

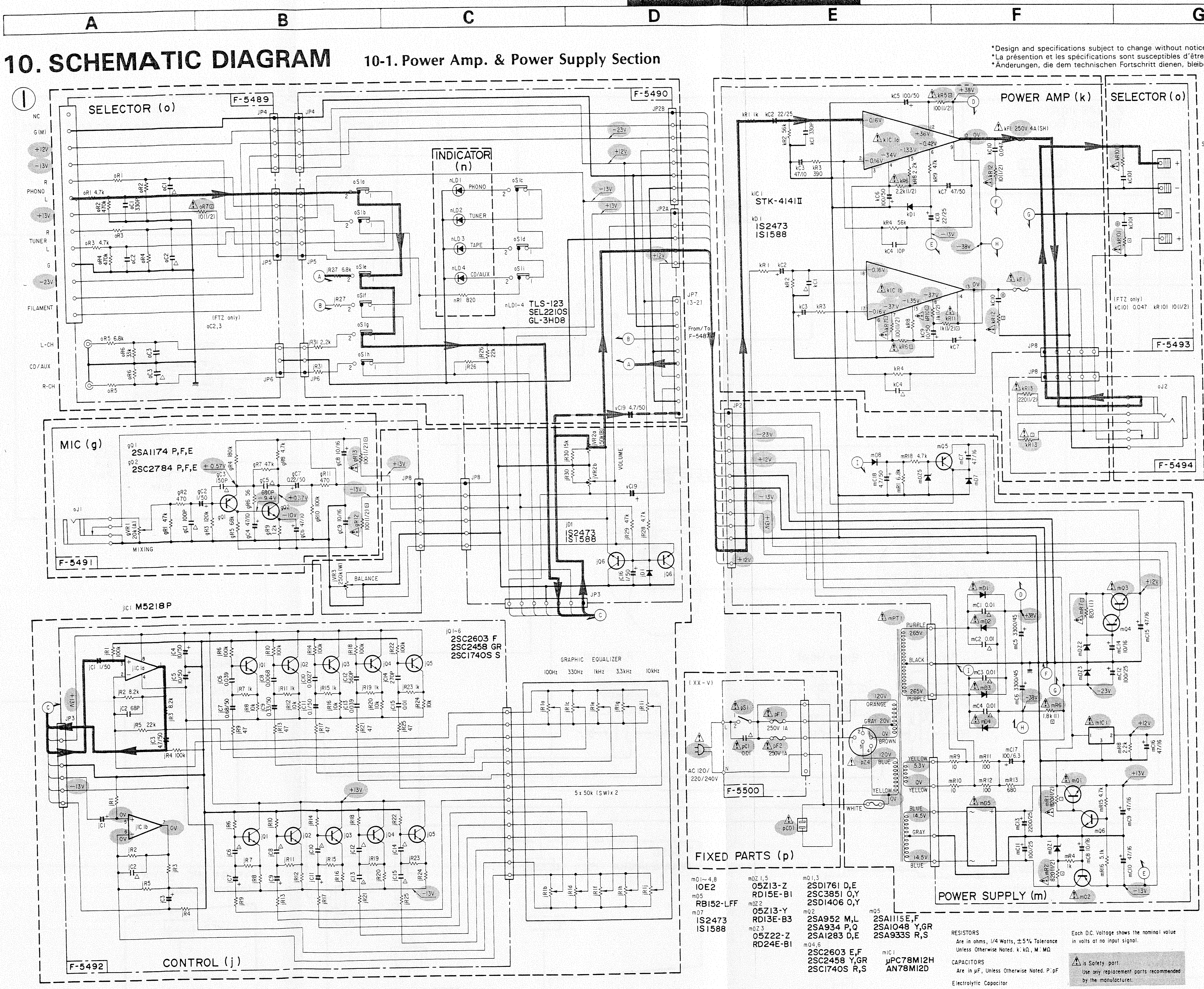
9. WIRING DIAGRAM


F-5489 Input Terminal Board
JP4
JP5,6
JP1
F-5493 Power Amp. & Power Supply Board
JP2
PURP BLU GRN YEL ORG BRN
F-5487 Cassette Deck Amp. Board
GRY
JPD
RED
BLU
GRN
YEL
ORG
RED
BRN
JPC
JP7
JP9
GRY
WHT
BRN
PINK
BLK
WHT
PINK
BLK
BLK
WHT
JPB
GRY
BRN
PINK
BLK
BLK
PINK
JPA
GRY
Normal Metal
RED
RED
ORG
BRN
Normal
RED
BLU
PURP
GRY
GRN
RED
RED
Play SW.
Rec SW.
GRN
BLU
YEL
ORG
BRN
RED
b-side
a-side
BRN
RED
BRN
RED
Rec/P.B Head
Erase Head
P.B Head
WHT
BLK
WHT
BRN
GRY
GRY
BLK
WHT
GRY
BLK
PINK
Mechanism
F-5488 DUBBING and DOLBY SW. Board
JP9
JP4
F-5490 Input Selector Switch Board
JP6
JP5
JP3
JP7
JP2B
JP2A
JP8
F-5491 MIC, BALANCE Volume Board
JP8
F-5944 PHONES Jack Board
F-5492 Graphic EQ. Board
JP3

10. SCHEMATIC DIAGRAM

10-1. Power Amp. & Power Supply Section

*Design and specifications subject to change without notice for improvement.
*La présention et les spécifications sont susceptibles d'être modifiées sans préavis par suites d'améliorations éventuelles.
*Änderungen, die dem technischen Fortschritt dienen, bleiben vorbehalten.


A
B
C
D
E
F
G
H
①
SELECTOR (o)
F-5489
F-5490
INDICATOR (n)
PHONO
TUNER
TAPE
CD/AUX
TLS-123
SEL2210S
GL-3HD8
MIC (g)
2SA1174 P,F,E
2SC2784 P,F,E
F-5491
MIXING
BALANCE
VOLUME
jD1 1S2473 1S1588
jIC1 M5218P
jQ1~6 2SC2603 F 2SC2458 GR 2SC1740S S
GRAPHIC EQUALIZER
100Hz 330Hz 1kHz 3.3kHz 10kHz
5 x 50k (SW) x 2
F-5492
CONTROL (j)
POWER AMP (k)
SELECTOR (o)
kIC1 STK-4141II
kD1 1S2473 1S1588
SPEAKERS
L-CH
R-CH
25W+25W/8Ω
F-5493
PHONES
30mW+30mW/8Ω
F-5494
FIXED PARTS (p)
AC 120/220/240V
F-5500
POWER SUPPLY (m)
NC
G(M)
+12V
-13V
R
PHONO
L
TUNER
G
-23V
FILAMENT
L-CH
CD/AUX
R-CH
+38V
-38V

mD1~4,8
10E2
mD5
RB152-LFF
mD7
1S2473
1S1588

mDZ1,5
05Z13-Z
RD15E-B1
mDZ2
05Z13-Y
RD13E-B3
mDZ3
05Z22-Z
RD24E-B1

mQ1,3
2SD1761 D,E
2SC3851 O,Y
2SD1406 O,Y
mQ2
2SA952 M,L
2SA934 P,Q
2SA1283 D,E
mQ4,6
2SC2603 E,F
2SC2458 Y,GR
2SC1740S R,S

mQ5
2SA1115E,F
2SA1048 Y,GR
2SA933S R,S
mIC1
μPC78M12H
AN78M12D

RESISTORS
Are in ohms, 1/4 Watts, ±5% Tolerance
Unless Otherwise Noted. k: kΩ, M: MΩ

CAPACITORS
Are in μF, Unless Otherwise Noted. P: pF

Electrolytic Capacitor
Capacitance (μF) / Volt (V)

Each D.C. Voltage shows the nominal value in volts at no input signal.

⚠ is Safety part.
Use only replacement parts recommended by the manufacturer.

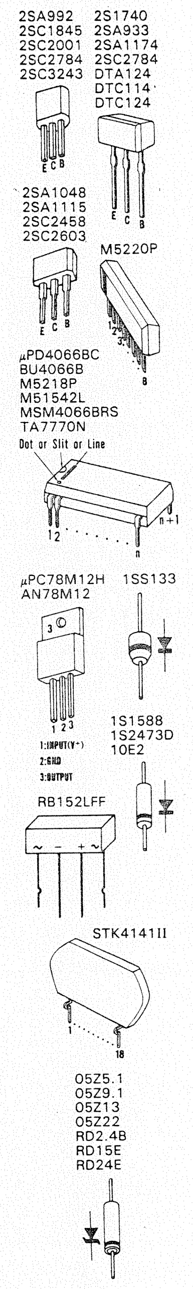
Signal Line (Phono)

oS1 INPUT SELECTOR
oS1a~c
2. PHONO
1. TUNER
oS1d~f
2. TAPE
oS1g~i
2. CD/AUX

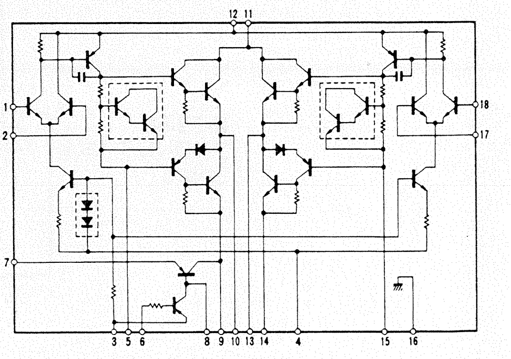
pS1 POWER
1. OFF 2. ON

SYMBOL OF FUNCTION
(j) CONTROL
(k) POWER AMP
(m) POWER SUPPLY
(n) INDICATOR
(o) SELECTOR
(p) FIXED PARTS

SYMBOL
△ Ceramic
⚠ Barrier Layer Capacitor
◎ Film
⊡ Non-Inflammable Resistor

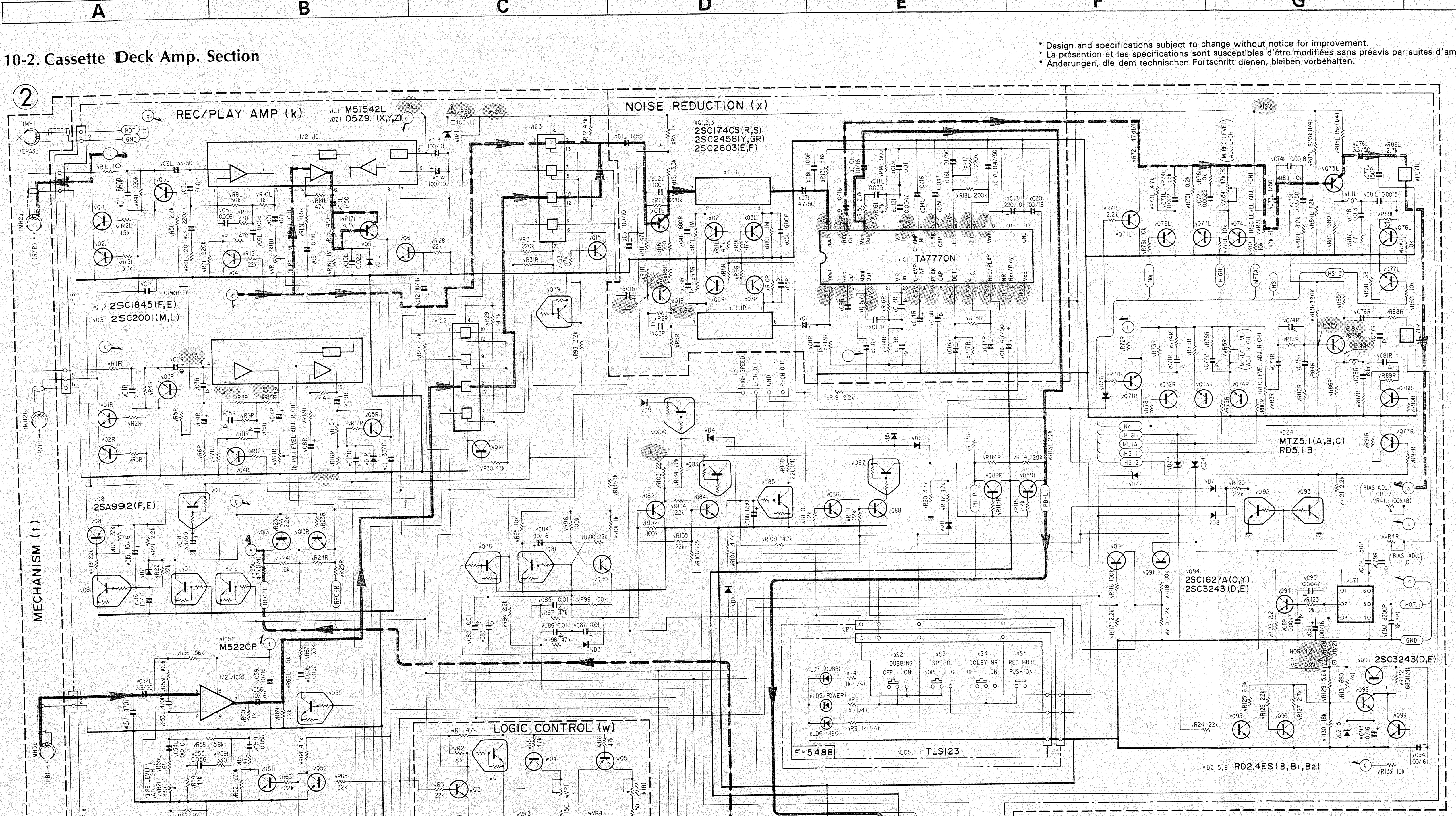

2SA992 2SC1845 2SC2001 2SC2784 2SC3243
2S1740 2SA933 2SA1174 2SC2784 DTA124 DTC114 DTC124
E C B
E C B
2SA1048 2SA1115 2SC2458 2SC2603
E C B
M5220P
1 2 3
8
μPD4066BC BU4066B M5218P M51542L MSM4066BRS TA7770N
Dot or Slit or Line
1 2
n
n+1
μPC78M12H AN78M12
1SS133
3
1 2 3
1:INPUT(V+)
2:GND
3:OUTPUT
1S1588 1S2473D 10E2
RB152LFF
~ − + ~
STK4141II
1
18
05Z5.1 05Z9.1 05Z13 05Z22 RD2.4B RD15E RD24E
1
2
3
4
5

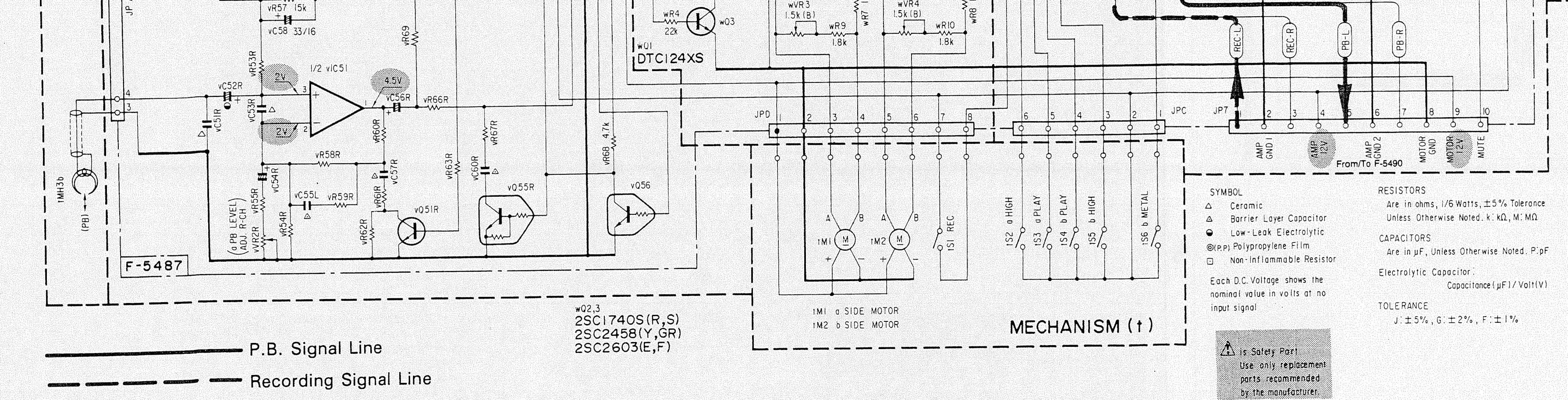
•STK4141II (Power Amp.)


12 11
1
2
7
18
17
3 5 6
8 9 10 13 14
4
15 16

10-2. Cassette Deck Amp. Section

* Design and specifications subject to change without notice for improvement.
* La présentation et les spécifications sont susceptibles d'être modifiées sans préavis par suites d'améliorations éventuelles.
* Änderungen, die dem technischen Fortschritt dienen, bleiben vorbehalten.


A
B
C
D
E
F
G
H
1
2
3
4
5
②
REC/PLAY AMP (k)
vIC1 M51542L
vDZ1 05Z9.1(X,Y,Z)
+12V
NOISE REDUCTION (x)
xQ1,2,3
2SC1740S(R,S)
2SC2458(Y,GR)
2SC2603(E,F)
xIC1 TA7770N
vQ1,2 2SC1845(F,E)
vQ3 2SC2001(M,L)
vQ8 2SA992(F,E)
MECHANISM (t)
vIC51 M5220P
vDZ4 MTZ5.1(A,B,C) RD5.1B
vQ94 2SC1627A(O,Y) 2SC3243(D,E)
vQ97 2SC3243(D,E)
F-5488
TLS123
DUBBING
SPEED
DOLBY NR
REC MUTE
HOT
GND


LOGIC CONTROL (w)
wQ1 DTC124XS
F-5487
MECHANISM (t)
1M1 a SIDE MOTOR
1M2 b SIDE MOTOR
wQ2,3
2SC1740S(R,S)
2SC2458(Y,GR)
2SC2603(E,F)
JPD
JPC
JP7
AMP GND 1
AMP 12V
AMP GND 2
MOTOR GND
MOTOR 12V
MUTE
From/To F-5490

——— P.B. Signal Line

— — — Recording Signal Line

SYMBOL
△ Ceramic
△ Barrier Layer Capacitor
◒ Low-Leak Electrolytic
◎(P.P.) Polypropylene Film
▢ Non-Inflammable Resistor

Each D.C. Voltage shows the nominal value in volts at no input signal

⚠ is Safety Part
Use only replacement parts recommended by the manufacturer.

RESISTORS
Are in ohms, 1/6 Watts, ±5% Tolerance Unless Otherwise Noted. k: kΩ, M: MΩ

CAPACITORS
Are in µF, Unless Otherwise Noted. P: pF

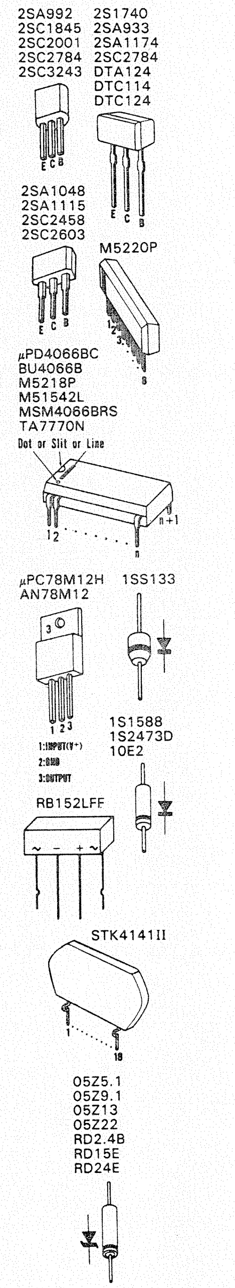
Electrolytic Capacitor:
Capacitance(µF)/Volt(V)

TOLERANCE
J: ±5%, G: ±2%, F: ±1%

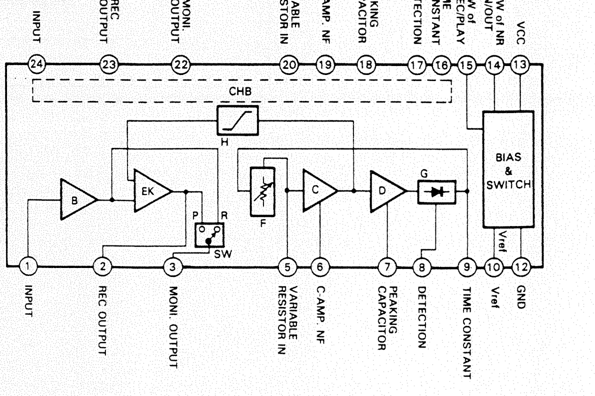
OPTIONAL USE OF SEMICONDUCTOR

vQ10,83,87,100	DTA124XS
vQ9,11,12,55,78,79,81,85	DTC124XS
vQ56,92,93	DTC114TS
vQ90,91, wQ4,5	2SA933S(R,S) 2SA1048(Y,GR) 2SA1115(E,F)
vQ4,5,6,13,14,15,51,52 71,72,73,74,75,76,77,80 82,84,86,88,89,95,96,98,99	2SC1740S(R,S) 2SC2458(Y,GR) 2SC2603(E,F)
vD1,2,3,4,5,6,7,8,9,10,11	1SS133
vDZ2,3	05Z5.1(X,Y,Z)
vIC2,3	TC4066BP, µPD4066BC MSM4066BRS, BU4066B

SYMBOL OF FUNCTION
(n) INDICATOR
(o) SELECTOR
(t) MECHANISM
(v) REC/PLAY AMP
(w) LOGIC CONTROL
(x) NOISE REDUCTION

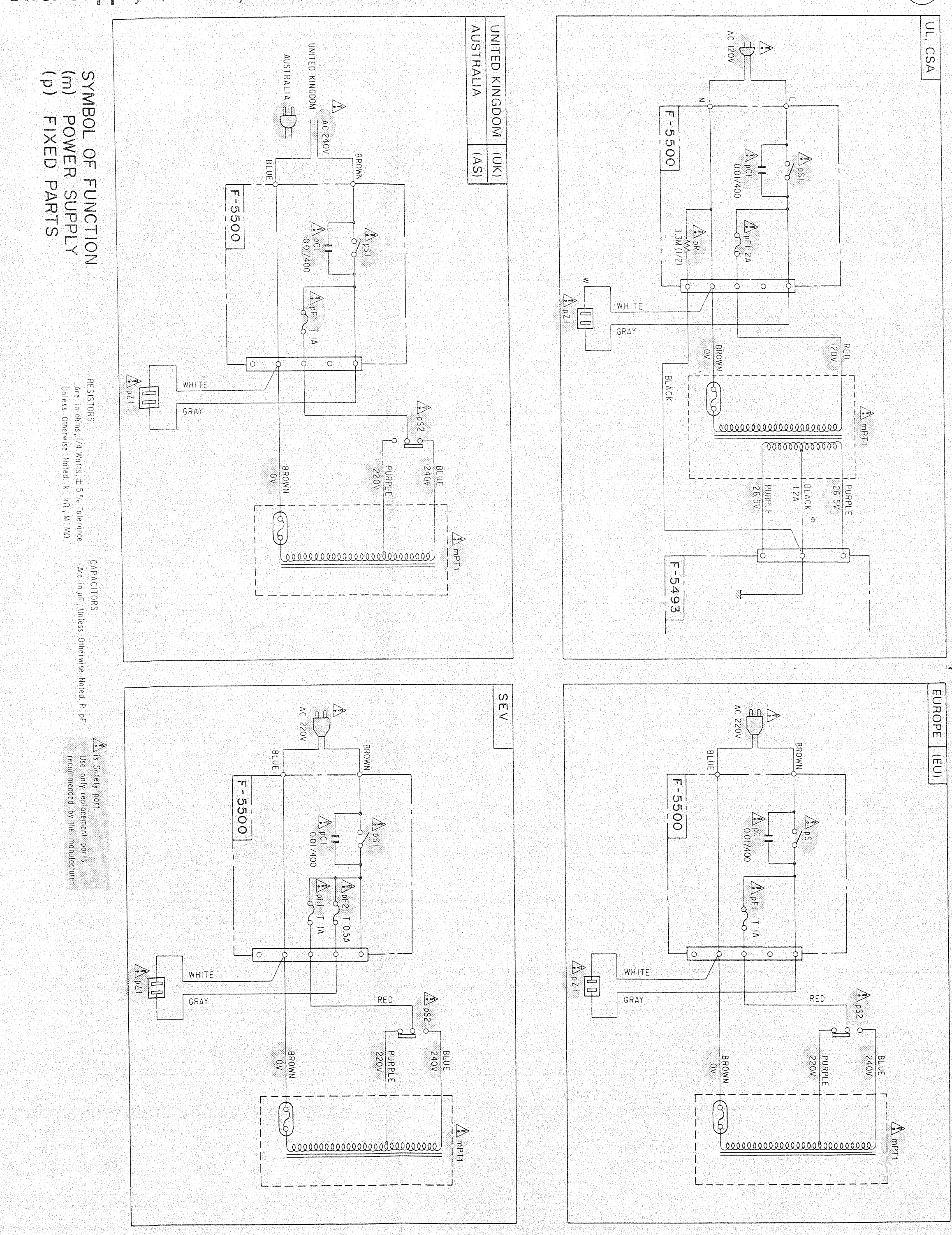

2SA992
2SC1845
2SC2001
2SC2784
2SC3243
2S1740
2SA933
2SA1174
2SC2784
DTA124
DTC114
DTC124
E C B
2SA1048
2SA1115
2SC2458
2SC2603
M5220P
µPD4066BC
BU4066B
M5218P
M51542L
MSM4066BRS
TA7770N
Dot or Slit or Line
1 2
n
n+1
µPC78M12H
AN78M12
1SS133
1 2 3
1:INPUT(V+)
2:GND
3:OUTPUT
1S1588
1S2473D
10E2
RB152LFF
~ − + ~
STK4141II
1
18
05Z5.1
05Z9.1
05Z13
05Z22
RD2.4B
RD15E
RD24E

•TA7770N (Dolby Noise Reduction)


INPUT
REC OUTPUT
MONI. OUTPUT
VRRIABLE RESISTOR IN
C-AMP. NF
PEAKING CAPACITOR
DETECTION
TIME CONSTANT
SW of REC/PLAY
SW of NR IN/OUT
VCC
24
23
22
20
19
18
17
16
15
14
13
CHB
H
B
EK
P
R
SW
F
C
D
G
BIAS & SWITCH
Vref
1
2
3
5
6
7
8
9
10
12
INPUT
REC OUTPUT
MONI. OUTPUT
VARIABLE RESISTOR IN
C-AMP. NF
PEAKING CAPACITOR
DETECTION
TIME CONSTANT
Vref
GND

10-3. Power Supply (Primary Side) Section

③


UNITED KINGDOM (UK)
AUSTRALIA (AS)
UL, CSA
SEV
EUROPE (EU)
UNITED KINGDOM
AUSTRALIA
AC 240V
AC 120V
AC 220V
BROWN
BLUE
WHITE
GRAY
RED
PURPLE
BLACK
F-5500
F-5493
pS1
pS2
pC1
001/400
pF1
T 1A
T 2A
pF2
T 0.5A
pR1
3.3M 1/2W
pZ1
mPT1
0V
220V
240V
26.5V
12A
N
L
W

SYMBOL OF FUNCTION
(m) POWER SUPPLY
(p) FIXED PARTS

RESISTORS
Are in ohms, 1/4 Watts, ±5% Tolerance
Unless Otherwise Noted. k: kΩ, M: MΩ

CAPACITORS
Are in μF, Unless Otherwise Noted. P: pF

⚠ is Safety part.
Use only replacement parts
recommended by the manufacturer.

* Design and specifications subject to change without notice for improvement.
* La présention et les spécifications sont susceptibles d'être modifiées sans préavis par suites d'améliorations éventuelles.
* Änderungen, die dem technischen Fortschritt dienen, bleiben vorbehalten.

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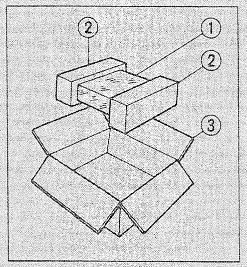
12. ACCESSORY LIST

Parts No.	Stock No.	Description
1	47859600	Vinyl Bag
2	27233700	Styrofoam Packing
3	27230400	Carton Case



11. PACKING LIST

Stock No.	Description
48576700	13P ST Connector Cable, system control
49015000	Operating Instruction (*E·F·S)
49015100	Operating Instruction (*G·I·Sw)

*Note:
E·F·S: **E**nglish·**F**rench and **S**panish Version
G·I·Sw: **G**erman·**I**talian and **Sw**edish Version

SANSUI ELECTRIC CO., LTD.: 14-1, Izumi 2-chome, Suginami-ku, Tokyo 168 Japan
PHONE: (03) 324-8891/TELEX: 232-2076 (International Division)
SANSUI ELECTRONICS CORPORATION: 1250 Valley Brook Ave. Lyndhurst, N.J. 07071 U.S.A.
17150 South Margay Ave. Carson, California 90746 U.S.A.
3036 Koapaka Street. Honolulu, Hawaii 96819 U.S.A.
SANSUI ELECTRONICS (U.K.) LTD.: Unit 10A, Lyon Industrial Estate, Rockware Avenue, Greenford, Middx UB6, OAA, England
SANSUI ELECTRONICS G.M.B.H.: Pau Ehrich Strasse 8, 6074 Rödermark 2, West Germany

(SM1-332) (1986.10.M) <Stock No. 36527000>